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LINGUISTICS AND PATENT CLAIM CONSTRUCTION

*Kristen Osenga**

Things are not made for the sake of words, but words for things.¹

It begins with a collection of words—a single sentence that can be worth thousands, or even millions, of dollars, or may instead be worth little more than the paper on which it is written; a sentence that can secure one company's financial future or spell another company's ruin.² It all begins with the patent claim, a single sentence given the extraordinary function of

* Assistant Professor of Law, University of Richmond School of Law. I would like to thank Katharine Baker, Timothy Holbrook, and Joseph Scott Miller for their comments on early drafts of this paper. I also appreciate the helpful suggestions on even earlier drafts of this paper by participants at the Fifth Annual Intellectual Property Scholars Conference at Cardozo School of Law and a faculty workshop at Chicago-Kent College of Law. Finally, I thank Steven Jinks (Chicago-Kent, '07) for his research assistance in preparing the CAFC Lexicon described herein. Any errors are mine. Comments are appreciated at kosenga@richmond.edu.

1. *Autogiro Co. of Am. v. United States*, 384 F.2d 391, 397 (Ct. Cl. 1967).

2. Consider, at one end of the spectrum, Yahoo!'s takeover of Overture in 2003. In a deal valued at \$1.63 billion, Yahoo! acquired Overture for no apparent reason other than Overture's U.S. Patent No. 6,269,361 which covers advertisement placement technology used by various companies, including Yahoo! competitor, Google. Armed with this patent, Yahoo! then acquired 2.7 million shares of Google stock at its initial public offering in exchange for Google's continued use of advertisement placement covered by the '361 patent. See Saul Hansell, *Google and Yahoo Settle Dispute over Search Patent*, N.Y. TIMES, Aug. 10, 2004, at C6; Usman Latif, *Google's Bid-for-placement Patent Settlement Cover-up*, TECHUSER.NET, May 31, 2005, <http://www.techuser.net/gcoverup.html>. On the other end of the spectrum, simply being on the defending end of patent infringement litigation, regardless of the party's strength on the merits, may be enough to drive small companies out of business. See, e.g., *Patent Law Revision: Testimony Before the Comm. on S. Judiciary Subcomm. on Intellectual Property* (2005), available at 2005 WLNR 9424393 (statement of Chuck Fish, Vice President and Chief Patent Counsel, Time Warner, Inc.) (asserting that some companies may go out of business simply attempting to defend against a patent infringement suit, let alone after losing on the merits).

designating the metes and bounds of an invention, providing notice to the public to advance technology, and providing notice to competitors to avoid trespass.³ The value of the sentence, whether financial or functional, often turns on the definition or construction given to the terms that comprise it. And yet, claim construction—the process of giving the claim meaning through defining its terms—is largely an unsettled and uncertain area of patent law.⁴ In part, this uncertainty may be due to the U.S. Court of Appeals for the Federal Circuit's failure to provide adequate guidance on the process. This Article suggests that the Federal Circuit should clarify its claim construction jurisprudence and look to the science of linguistics to provide bases for an improved set of guidelines that will improve financial and functional certainty in patent law.

In particular, this Article argues that claim construction should instead track the way in which we, as readers of a language,⁵ attempt to understand what is being conveyed via the written word. First, there is a base level of conventional understanding from which all interpretation starts, an understanding that either a priori exists based on our earlier encounters with the word or is obtained from a dictionary in cases in which we lack previous knowledge. Second, from this conventional understanding, we construct the actual meaning of the term based on a number of linguistic clues. These clues are both internal and external to the language we are interpreting. Internal linguistic clues include syntactic hints divined from the grammar and sentence structure of the language to be interpreted. External linguistic clues include situational pragmatics, or the use of non-linguistic factors, such as the underlying knowledge of the interpreter that aids understanding.

Part I of this Article provides a background of the patent claim. Part II discusses the history of the Federal Circuit's claim construction jurisprudence, from *Markman v. Westview Instruments, Inc.*, the Supreme Court opinion turning the reins of claim construction over to judges, to *Phillips v. AWH Corp.*, the en banc Federal Circuit case that was intended to clarify the process of claim construction, but failed to do so. This section also

3. See 35 U.S.C. § 112 (2000) ("The [patent] specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.").

4. See, e.g., Dan L. Burk & Mark A. Lemley, *Quantum Patent Mechanics*, 9 LEWIS & CLARK L. REV. 29, 34 (2005) ("Although claim interpretation is fundamental to patent law, both the theory and doctrine of the practice remain astonishingly underdeveloped . . .").

5. Because claim construction relates to patent claims, which are parts of a written document, persons attempting to understand claims will be referred to as readers. Linguistics, however, often discusses the interpreter as a listener or hearer of the language to be interpreted.

describes and analyzes a number of claim construction canons, the auxiliary guidelines for performing the claim construction process. Finally, Part III looks briefly at linguistics in general and then proposes the use of linguistic techniques as a preferred methodology for claim construction. This section also considers the conjunction of the proposed linguistic-based methodologies with existing claim construction canons to develop a complete claim construction process.

I. INTRODUCTION TO PATENT CLAIMS

*To coin a phrase, “the name of the game is the claim.”*⁶

An application for a United States patent includes a specification and one or more drawings.⁷ The specification consists of a written description of the invention and the claims.⁸ The written description is written in prose, sentences and paragraphs, and includes a background of the invention as well as detailed information on how to make, use, and/or perform the invention.⁹ At the end of the written description are one or more claims, each a single sentence that describes an invention entirely of its own.¹⁰ While the written description provides a more fulsome disclosure, the legal metes and bounds of the invention are defined by the claims.¹¹

6. Giles S. Rich, *Extent of Protection and Interpretation of Claims—American Perspectives*, 21 INT’L REV. INDUS. PROP. & COPYRIGHT L. 497, 499 (1990).

7. See 35 U.S.C. § 111(a)(2) (2000). Although not relevant to this discussion, the application must also include an oath or declaration. See *id.*

8. See *id.* § 112. The term “specification” is often used interchangeably, although inaccurately, to refer to just the written description.

9. See *id.*; see also *Capon v. Eshhar*, 418 F.3d 1349, 1357 (Fed. Cir. 2005) (explaining that “[t]he ‘written description’ requirement implements the principle that a patent must describe the technology . . . sought to be patented . . . [and] serves both to satisfy the inventor’s obligation to disclose the technologic knowledge upon which the patent is based, and to demonstrate that the patentee was in possession of the invention that is claimed”).

10. See 35 U.S.C. § 112. Technically, claims may be independent, meaning the claim does describe an invention entirely of its own, or dependent, meaning that it builds off a prior independent claim. See *id.* However, “a claim in dependent form shall contain a reference to a claim previously set forth and then specify a further limitation of the subject matter claimed. A claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers.” *Id.* Therefore, for the purposes of this discussion, each claim stands independently.

11. See, e.g., *Aro Mfg. Co. v. Convertible Top Replacement Co.*, 365 U.S. 336, 339 (1961) (“The claims made in the patent are the sole measure of the grant . . .”), *aff’d in part, rev’d in part*, 377 U.S. 476 (1964); *Zenith Labs., Inc. v. Bristol-Myers Squibb Co.*, 19 F.3d

Because it is the claims that serve to define the outer extent of a patentee's exclusionary right, they therefore must serve the dual functions of putting boundaries on the patentee's monopoly¹² and providing sufficient notice of that monopoly to allow the public to avoid infringing the patent.¹³ The uncertainty over the proper procedure for claim construction has led to uncertainty in patent scope,¹⁴ which in turn negates the notice and boundary-staking functions to be performed by the patent claim. In fact, it was with the hope of achieving consistency and certainty in claim scope that district court judges were charged with the task of claim construction:

[I]t is only fair (and statutorily required) that competitors be able to ascertain to a reasonable degree the scope of the patentee's right to exclude. . . .
[C]ompetitors should be able to rest assured, if infringement litigation

1418, 1424 (Fed. Cir. 1994) ("[T]he claim . . . sets the metes and bounds of the invention entitled to the protection of the patent system.").

12. See *Renishaw PLC v. Marposs Societa' Per Azioni*, 158 F.3d 1243, 1248 (Fed. Cir. 1998) ("[C]laims define the scope of the right to exclude; the claim construction inquiry, therefore, begins and ends in all cases with the actual words of the claim." (citations omitted)); *Corning Glass Works v. Sumitomo Elec. U.S.A., Inc.*, 868 F.2d 1251, 1257 (Fed. Cir. 1989) ("A claim in a patent provides the metes and bounds of the right which the patent confers on the patentee to exclude others from making, using, or selling the protected invention.").

13. As the Federal Circuit explained:

[O]ne of ordinary skill in the art should be able to read a patent, to discern which matter is disclosed and discussed in the written description, and to recognize which matter has been claimed. . . . The ability to discern both what has been disclosed and what has been claimed is the essence of public notice. It tells the public which products or processes would infringe the patent and which would not.

PSC Computer Prods., Inc. v. Foxconn Int'l, Inc., 355 F.3d 1353, 1359-60 (Fed. Cir. 2004); see also *SmithKline Beecham Corp. v. Apotex Corp.*, 403 F.3d 1331, 1358 (Fed. Cir. 2005) (same), *cert. denied*, 126 S. Ct. 2887 (2006); *Litton Sys., Inc. v. Honeywell, Inc.*, 145 F.3d 1472, 1474 (Fed. Cir. 1998) (Gajarsa, J., dissenting) ("Public notice of the scope of the right to exclude, as provided by the patent claims, specification and prosecution history, is a critical function of the entire scheme of patent law. The notice function is critical because it provides competitors with the necessary information upon which they can rely to shape their behavior in the marketplace.").

14. See, e.g., Christopher A. Cotropia, *Patent Claim Interpretation Methodologies and Their Claim Scope Paradigms*, 47 WM. & MARY L. REV. 49, 99 (2005).

The discretion left to the courts when approaching claim construction creates an uncertainty itself. Because no statute describes exactly how courts should interpret claims, observers must look to the courts for guidance on interpretation issues. Without clear direction from the courts in the form of a single methodology, one cannot predict a claim's meaning because of the uncertainty about which methodology will be used.

Id.

occurs, that a judge, trained in the law, will similarly analyze the text of the patent and its associated public record and apply the established rules of construction, and in that way arrive at the *true and consistent* scope of the patent owner's rights to be given legal effect.¹⁵

In reality, however, this consistency and certainty is not being achieved. Although claim construction is a matter of law,¹⁶ studies have shown that a district court judge's claim construction is reversed by the Federal Circuit in approximately one-third of all patent cases.¹⁷ How is it that district court judges, most of whom are skilled at similar tasks of contract interpretation and statutory construction, are getting claim construction so wrong?

Part of the problem may be the structure of claims themselves. The patent claim is a single sentence that utilizes words to recite a textual description of what the patentee considers his invention. Parsing that idea, two immediate problems come to mind. First, there is the difficulty of explaining anything complex in a single, concise, and comprehensible sentence; in fact, it is difficult to explain something as simple as a peanut-butter-and-jelly sandwich given this constraint.¹⁸ Although people unfamiliar

15. *Markman v. Westview Instruments, Inc. (Markman I)*, 52 F.3d 967, 978-79 (Fed. Cir. 1995) (in banc) (emphasis added), *aff'd*, 517 U.S. 370 (1996).

16. See *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1455 (Fed. Cir. 1998) (in banc).

17. See Christian A. Chu, *Empirical Analysis of the Federal Circuit's Claim Construction Trends*, 16 BERKELEY TECH. L.J. 1075, 1104 (2001) (analyzing 179 cases wherein the Federal Circuit provided an express review of claim construction and finding a reversal rate of 29.6%); Kimberly A. Moore, *Are District Court Judges Equipped to Resolve Patent Cases?*, 15 HARV. J.L. & TECH. 1, 11 (2001) (finding that district courts erred in 28% of claim construction cases prior to 2001); Kimberly A. Moore, *Markman Eight Years Later: Is Claim Construction More Predictable?*, 9 LEWIS & CLARK L. REV. 231, 233 (2005) (finding a 34.5% claim construction reversal for cases appealed from 1996, after *Markman I*, to 2003); Andrew T. Zidel, *Patent Claim Construction in the Trial Courts: A Study Showing the Need for Clear Guidance from the Federal Circuit*, 33 SETON HALL L. REV. 711, 746 (2003) (finding a reversal rate of 41.5% in patent cases from 2001).

18. For example, consider the following claim for what is essentially a peanut butter-and-jelly sandwich with crimped edges:

1. A sealed crustless sandwich, comprising:
 - a first bread layer having a first perimeter surface coplanar to a contact surface;
 - at least one filling of an edible food juxtaposed to said contact surface;
 - a second bread layer juxtaposed to said at least one filling opposite of said first bread layer, wherein said second bread layer includes a second perimeter surface similar to said first perimeter surface;

with patent drafting are often troubled by this concept, patent claims have been written as a single sentence since the time claims became part of the patent application,¹⁹ and claim construction would not likely be any less problematic if multi-sentence claims were permissible.²⁰ Rather than arguing for a change in patent drafting rules, this Article asserts that the single sentence framework, among other things, requires a modification on traditional syntactic analysis because word order and parts of speech are often juxtaposed from common English usage to fit the framework.²¹

Second, there is the inherent inadequacy of language to describe that which is new, as inventions are required to be.²² As a predecessor court to the Federal Circuit noted:

An invention exists most importantly as a tangible structure or a series of drawings. A verbal portrayal is usually an afterthought written to satisfy the requirements of patent law. This conversion of machine to words allows for unintended idea gaps which cannot be satisfactorily filled. Often the invention is novel and words do not exist to describe it.²³

a crimped edge directly between said first perimeter surface and said second perimeter surface for sealing said at least one filling between said first bread layer and said second bread layer;
wherein a crust portion of said first bread layer and said second bread layer has been removed.

Sealed Crustless Sandwich, U.S. Patent No. 6,004,596 col.4 ll.15-31 (filed Dec. 8, 1997); *see also* Editorial, *Patently Ridiculous*, ST. PETERSBURG TIMES, Feb. 24, 2003, at 8A (describing the '596 patent as covering a one-piece, crustless peanut butter-and-jelly sandwich).

19. *See* Fressola v. Manbeck, 36 U.S.P.Q.2d 1211, 1215 (D.D.C. 1995) (upholding the Patent Office's requirement that patent claims be drafted as single sentences).

20. At least one Federal Circuit judge disagrees with this premise. *See* S. Jay Plager, *Challenges for Intellectual Property Law in the Twenty-First Century: Indeterminacy and Other Problems*, 2001 U. ILL. L. REV. 69, 72 (2001) ("Because claims in U.S. patents are written using words and phrases that purport to be in the English language, it might help if the rest of English language practice was used: short declarative sentences, careful and precise phrasing, and so on.").

21. *See infra* Part III.

22. In order to satisfy the novelty requirement, the invention must not have been described in another reference prior to invention by the patentee, nor can the invention have been described, publicly used, or offered for sale more than one year prior to invention by the patentee. 35 U.S.C. § 102(a)-(b) (2000).

23. *Autogiro Co. of Am. v. United States*, 384 F.2d 391, 397 (Ct. Cl. 1967); *cf.* *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722, 734 (2002) ("The doctrine of equivalents is premised on language's inability to capture the essence of innovation . . ."). Some judges, however, would place the blame not on the difficulties of crafting claims for

One way this problem manifests itself is that patent claims often include words used in a slightly unexpected manner, such as when a word is used as a part of speech that is unusual for that term or when atypical word pairings are used to craft unusual phrases. One example of this is the use of nouns and verbs as adjectives, such as in “*perimeter surface*” from the peanut butter-and-jelly sandwich patent described above.²⁴

Beyond the language difficulties of attempting to describe an invention completely and precisely in a single sentence and using existing words to describe a new invention, the process involved in drafting claims raises yet another problem. The patent applicant, in drafting claims, is trying to walk a thin line of fashioning a claim sufficiently narrow that it is not invalid over the prior art, but at the same time trying to obtain a sufficiently wide scope of protection that may include coverage of future devices.²⁵ In navigating this line, the patentee often results to hedge-type words, such as “about” and “substantially” that obscure definitions,²⁶ or to quasi-clear phrases that allow for some wiggle room, such as “normally connectible.”²⁷

In addition, the very types of cases that make it to the Federal Circuit on claim construction issues might explain part of the high rate of reversal. In particular, only a certain type of case involving claim construction is likely to be appealed, or even make it to trial at all.²⁸ The cases most likely to be

new inventions, but rather the inartful language abilities of lawyers. *See ZMI Corp. v. Cardiac Resuscitator Corp.*, 844 F.2d 1576, 1583 (Fed. Cir. 1988) (Nichols, J., dissenting) (“We are up against what we must realistically consider a growing inability of speakers and writers, lawyers, technicians, and laymen, to say what they intend to say with accuracy and clarity.”).

24. *See supra* note 18.

25. *See Karsten Mfg. Corp. v. Cleveland Golf Co.*, 242 F.3d 1376, 1384 (Fed. Cir. 2001) (“The jurisprudence of claim construction reflects the difficult balance between a patentee’s exhortation that courts should read the claims broadly and unlimited to the specific embodiments shown in the specification, and the rule that claims should be construed sufficiently narrowly to preserve their validity.”).

26. *See, e.g., Ecolab, Inc. v. Envirochem, Inc.*, 264 F.3d 1358, 1367 (Fed. Cir. 2001) (“We note that like the term ‘about,’ the term ‘substantially’ is a descriptive term commonly used in patent claims to ‘avoid a strict numerical boundary to the specified parameter.’” (quoting *Pall Corp. v. Micron Separations, Inc.*, 66 F.3d 1211, 1217 (Fed. Cir. 1995))).

27. *See, e.g., PC Connector Solutions LLC v. SmartDisk Corp.*, 406 F.3d 1359, 1362-63 (Fed. Cir. 2005) (“normally connectible”); *Andrew Corp. v. Gabriel Elecs., Inc.*, 847 F.2d 819, 821-22 (Fed. Cir. 1988) (discussing the use of similarly quasi-clear phrases, such as “approach each other,” “close to,” “substantially equal,” and “closely approximate”).

28. *See George L. Priest & Benjamin Klein, The Selection of Disputes for Litigation*, 13 J. LEGAL STUD. 1, 2 (1984) (noting that academic analysis of data from appellate cases is skewed by the fact that only a “peculiar sample of cases” actually are tried and appealed). Klein and Priest then create a model to “clarify[y] the relationship between the set of disputes settled and the set litigated.” *Id.* at 4.

appealed are those cases where both parties agree they have a strong probability of success,²⁹ or particular to patent litigation cases, where each party's claim construction arguments are strong. If each party has a reasonable, albeit divergent, claim construction stance, it is more likely that the case will be appealed, as well as more likely that the district court and Federal Circuit may reach different conclusions.

While the type of cases that are appealed and the many problems of claim drafting surely account for some portion of the difficulty in construing patent claims in a concise and certain manner, a far larger portion is likely attributable to the Federal Circuit's failure to provide adequate guidance.

II. FEDERAL CIRCUIT CLAIM CONSTRUCTION JURISPRUDENCE

*Construing a term of art after receipt of evidence is a mongrel practice.*³⁰

A. The Importance of Claim Construction

The effort of the courts to understand a patent's claims—to define and determine the outer extents of the patentee's rights via the process of claim construction—is arguably the most important step in any patent litigation.³¹ In fact, patent litigation is often not focused on whether the accused infringing device includes a particular element, but rather on whether the language of the patent claim covers the element as it exists in the accused device.³² In these cases, the claim construction becomes the deciding factor.³³

29. See *id.* at 16 (tying the likelihood of settlement to the parties' beliefs about probable outcome).

30. *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1455 (Fed. Cir. 1998) (in banc) (internal quotation marks omitted).

31. See R. Polk Wagner & Lee Petherbridge, *Is the Federal Circuit Succeeding? An Empirical Assessment of Judicial Performance*, 152 U. PA. L. REV. 1105, 1119 (2004) ("[I]t is clear that claim construction plays a major—and perhaps the major—role in patent infringement litigation.").

32. See, e.g., *Gen. Mills, Inc. v. Hunt-Wesson, Inc.*, 103 F.3d 978, 983 (Fed. Cir. 1997) ("Where the parties do not dispute any relevant facts regarding the accused product, . . . but disagree over possible claim interpretations, the question of literal infringement collapses into claim construction and is amenable to summary judgment."); see also *Int'l Rectifier Corp. v. IXYS Corp.*, 361 F.3d 1363, 1374-75 (Fed. Cir. 2004) (same).

33. See, e.g., *ATD Corp. v. Lydall, Inc.*, 159 F.3d 534, 540 (Fed. Cir. 1998) ("[T]he question of literal infringement was resolved upon the court's construction of the claims."); *Markman I*, 52 F.3d 967, 999 (Fed. Cir. 1995) (in banc) (Newman, J., dissenting) ("Deciding the meaning of the words used in the patent is often dispositive of the question of infringement."), *aff'd*, 517 U.S. 370 (1996); *MCV, Inc. v. King-Seeley Thermos Co.*, 870 F.2d

There is some evidence that many patent infringement cases settle following claim construction, and those that do not are often decided on summary judgment.³⁴ Even where questions of fact exist, the first step in any patent case is claim construction.³⁵

While there is no argument that claim construction is an important process, there is, however, extensive disagreement about how it should be done. In part, any claim construction process is questionable because the court is necessarily generating “meta-claims,” or defining the words of a claim using additional words, which themselves are equally suspect to interpretation battles.³⁶ In larger part, the Federal Circuit has not only largely failed to provide adequate instruction on the issue, but it has even added to that confusion by promoting, at various times, alternative methods of claim

1568, 1570 (Fed. Cir. 1989) (“[T]he dispositive issue on the merits would be the definition of the invention . . .”).

Moreover, to speed infringement litigation along, it is not unheard of for parties to stipulate the outcome of infringement or invalidity issues based on claim construction rulings. *See, e.g.,* Housey Pharms., Inc. v. Astrazeneca UK Ltd., 366 F.3d 1348, 1349-50 (Fed. Cir. 2004) (noting that the patentee had stipulated that if the district court’s claim “construction were not reversed or modified on appeal, its patents would be invalid and not infringed”).

34. Mark A. Lemley, *The Changing Meaning of Patent Claim Terms*, 104 MICH. L. REV. 101, 102 & n.4 (2005); *see also* Kimberly A. Moore, *Forum Shopping in Patent Cases: Does Geographic Choice Affect Innovation?*, 79 N.C. L. REV. 889, 911 (2001). *But see* Arti K. Rai, *Engaging Facts and Policy: A Multi-Institutional Approach to Patent System Reform*, 103 COLUM. L. REV. 1035, 1059 (2003) (evidencing that only twenty-nine percent of patent infringement cases settle based on a trial court’s claim construction); 1999 ABA Section of Intellectual Property Law, *1999 Markman Survey*, 18 A.B.A. SEC. PUB. INTELL. PROP. L. 3, 13 (2000) (same).

35. Claim construction is the first step in infringement analysis, *Markman I*, 52 F.3d at 976, as well as invalidity analysis, *Amazon.com, Inc. v. Barnesandnoble.com, Inc.*, 239 F.3d 1343, 1351 (Fed. Cir. 2001). At a more basic level, claim construction is also performed by the Patent Office in determining whether a patent should even be granted. *See* U.S. PATENT & TRADEMARK OFFICE, *MANUAL OF PATENT EXAMINING PROCEDURE* § 2106(II)(C) (8th ed. 2001) (latest rev. 2006), *available at* <http://www.uspto.gov/web/offices/pac/mpep/index.html> (“[Patent Office] personnel must first determine the scope of a claim by thoroughly analyzing the language of the claim before determining if the claim complies with each statutory requirement for patentability.” (emphasis omitted)). It should be noted, however, that unlike litigation, claim construction at the Patent Office seeks the broadest reasonable interpretation of claim language. *See In re Morris*, 127 F.3d 1048, 1055 (Fed. Cir. 1997); *In re Zletz*, 893 F.2d 319, 321 (Fed. Cir. 1989).

36. Burk & Lemley, *supra* note 4, at 51-52; *see also* Lemley, *supra* note 34, at 101 n.2 (doubting “whether layering new words on top of old necessarily adds to the clarity of [patent] claims”).

construction.³⁷ The ensuing chaos and confusion over the process of claim construction has created an area of law rife with controversy.³⁸

Claim construction, in many respects, is not unlike the processes of statutory and contract interpretation that are well-worn provinces of the district court judge.³⁹ In its in banc decision in *Markman*, the Federal Circuit wrestled with the appropriate parallel for claim construction, analogizing the process to both statutory and contract interpretation.⁴⁰ Just as contract law requires that the respective parties agree to do something (or give up something) that they are not obligated to do in exchange for the other party's doing the same, the patentee agrees to make full disclosure of his invention, a task that he is not otherwise obligated to do, in return for receiving an exclusionary property right in the invention from the government.⁴¹ Similar to statutes, patents "are written instruments that all persons are presumed to be aware of and are bound to follow."⁴² Both statutes and patents are enforceable against the public, and the history of each, legislative in the case of statutes and prosecution in the case of patents, are matters of public record that can aid interpretation.⁴³ Given that the average district court judge has

37. See *infra* Part II.C.

38. This controversy has not only provided endless billable hours for patent litigators, see Chu, *supra* note 17, at 1078, but also excellent fodder for scholarly commentary. For just a few of the many possible examples, see Timothy R. Holbrook, *Substantive Versus Process-Based Formalism in Claim Construction*, 9 LEWIS & CLARK L. REV. 123 (2005); Joseph Scott Miller, *Enhancing Patent Disclosure for Faithful Claim Construction*, 9 LEWIS & CLARK L. REV. 177 (2005); Craig Allen Nard, *A Theory of Claim Interpretation*, 14 HARV. J.L. & TECH. 1 (2000) [hereinafter Nard, *Claim Interpretation*]; Wagner & Petherbridge, *supra* note 31.

39. See Burk & Lemley, *supra* note 4, at 49 ("Interpretation of texts is of course not unique to claim construction."). Interestingly, Burk and Lemley go on to note that very little of the vast body of literature devoted to interpretive techniques has been applied to the practice of claim construction. *Id.*

40. See *Markman I*, 52 F.3d at 985-87. The Federal Circuit ultimately concluded that claim construction is more akin to statutory interpretation, see *id.* at 987, but that particular outcome is not relevant to this discussion.

41. See *id.* at 985; see also *id.* at 997 (Mayer, J., concurring) (noting that "patents are legal documents like contracts or deeds"). Unlike contract law, patents are not executory—the Patent Office has no discretion in keeping its part of the bargain so long as the statutory requirements of patentability are met. *Id.* at 985 n.14 (majority opinion). Moreover, in many contracts, there may be a choice of parties with which to contract, but the patentee cannot, to obtain a patent, contract with anyone other than the government. *Id.*

42. *Id.* at 987.

43. See *id.* There are, of course, differences between patents and statutes, such as that patents are "prepared ex parte by interested parties, drafted in the lower reaches of an executive department, and issued ministerially by a political officer," and thus "have none of the indicia of a real statute." *Id.* at 998 n.8 (Mayer, J., concurring).

significant experience in one or both of these areas of interpretation, claim construction should be a familiar task. So why are these claim construction determinations so often reversed? In any case, the one nuance that separates claim construction from these other interpretive processes is the presence of the fictional “person having ordinary skill in the art” or PHOSITA.⁴⁴ However, the high rate of reversals certainly cannot be attributable to the addition of the PHOSITA.⁴⁵

Rather, the frequent reversals of district court claim constructions and resultant uncertainty in claim scope and public notice should likely be attributed to the lack of guidance on the topic by the Federal Circuit.⁴⁶ For example, until recently, the Federal Circuit was advancing two competing “methodologies” of claim construction that potentially result in disparate outcomes. For the purposes of this discussion, these methodologies will be identified as “specification-dependent” and “dictionary-dependent.”⁴⁷ During this period of competing claim construction processes, each methodology garnered a significant number of proponents among judges of the Federal Circuit.⁴⁸ As such, the district court judge has been left with inconsistent

44. See *Johnson Worldwide Assocs., Inc. v. Zebco Corp.*, 175 F.3d 985, 993 (Fed. Cir. 1999); *Multiform Desiccants, Inc. v. Medzam, Ltd.*, 133 F.3d 1473, 1477 (Fed. Cir. 1998) (“It is the person of ordinary skill in the field of invention through whose eyes the claims are construed.”).

45. The PHOSITA cannot be blamed for the extraordinarily large number of reversals because district court judges are skilled in working with other legal fictional characters, such as the reasonable person. In fact, the Federal Circuit has drawn the analogy between the “reasonable man” of tort law and the PHOSITA. See *Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561, 1566 (Fed. Cir. 1987). Moreover, at this point, the PHOSITA has been erroneously excised from claim construction methodology. See *infra* text accompanying notes 137-38.

46. Because the Supreme Court has historically been reluctant to take patent cases, especially on topics as pedestrian as claim construction, the Federal Circuit truly has been the guiding force for claim construction methodology. See Mark D. Janis, *Patent Law in the Age of the Invisible Supreme Court*, 2001 U. ILL. L. REV. 387, 387 (“[T]he Federal Circuit . . . has become the de facto supreme court of patents.”). The Supreme Court’s recent renewed interest in patent cases may alter this dynamic.

47. These competing methodologies will be described in more detail below. Other commentators have cloaked these methodologies in slightly different terminology. See, e.g., Cotropia, *supra* note 14, at 59 (“specification methodology” vs. “heavy presumption methodology”); Nard, *Claim Interpretation*, *supra* note 38, at 4 (“hypertextualism” vs. “pragmatic textualism”); Craig Allen Nard, *Process Considerations in the Age of Markman and Mantras*, 2001 U. ILL. L. REV. 355, 358 n.13 [hereinafter Nard, *Process Considerations*] (same); Wagner & Petherbridge, *supra* note 31, at 1111 (“holistic” vs. “procedural”). Nonetheless, the gist of the analysis remains similar.

48. See, e.g., Nard, *Process Considerations*, *supra* note 47, at 367-71 (describing Judges Rader, Newman, and Mayer as pragmatic textualists); Wagner & Petherbridge, *supra* note 31,

instructions for interpreting patent claim terms and, depending on which methodology he or she chooses, may construe a claim term using a different means than those favored by the appellate panel that ends up reviewing the opinion, resulting in the high rate of reversal.⁴⁹ This problem was so apparent that Professors Wagner and Petherbridge posited that claim construction outcomes could be predicted based on factors such as Federal Circuit panel composition.⁵⁰ Despite the Federal Circuit's subsequent effort to clarify its claim construction jurisprudence,⁵¹ the methodology still remains unclear

at 1155 (describing Judges Bryson and Lourie as holistic interpreters and Judges Linn and Dyk as proceduralists).

49. The Federal Circuit's performance is often viewed by other judges as "largely negative," Wagner & Petherbridge, *supra* note 31, at 1109 n.12, perhaps, in part, due to the Federal Circuit's willingness to reverse a significant portion of their claim construction determinations, *see* Merck & Co., Inc. v. Teva Pharms. USA, Inc., 395 F.3d 1364, 1381 (Fed. Cir. 2005) (Rader, J., dissenting) ("This court often hears criticism from district court judges that its reversal rate on claim construction issues far exceeds that of other circuit courts.").

50. *See* Wagner & Petherbridge, *supra* note 31, at 1163 (finding "that the individual membership and overall composition of a three-judge panel that decides an appeal has a statistically significant effect on the methodological approach used to analyze claim construction," and in short, that there is "ample evidence of panel dependency in claim construction at the Federal Circuit"); *see also* R. Polk Wagner, The Claim Construction Project, <http://predictor.claimconstruction.com> (last visited Feb. 17, 2007) ("The predictor tool uses the results of statistical regression analysis of the effect of panel membership on the results (methodological approach: holistic, procedural) of claim construction opinions."). Speaking for the other side of the bench, Judge Michel contends that the complaints of panel dependency are "exaggerated." Paul R. Michel, *The Court of Appeals for the Federal Circuit Must Evolve to Meet the Challenges Ahead*, 48 AM. U. L. REV. 1177, 1191 (1999).

In support of Wagner's theory that the panel composition effects claim construction outcome, consider the following tale. In November 2004, the Federal Circuit announced plans to experiment with pre-announcing panel composition one week prior to oral arguments. The Federal Circuit canceled the experiment prior to the June 2005 sessions without explanation. One explanation for cancellation of the pilot program may be the observation by Judge Mayer, during oral argument in the *Apotex v. Pfizer* case in March 2005, that "maybe posting paneling is a very, very bad thing." *See* Dennis Crouch, *CAFC Judge Mayer: "maybe posting paneling is a very, very bad thing."*, PATENTLY-O, Mar. 14, 2005, <http://patentlaw.typepad.com/patent/2005/03/>. Judge Mayer was reacting to a decision by Pfizer to execute a covenant not to sue Apotex in a case involving declaratory judgment jurisdiction based on an Abbreviated New Drug Application ("ANDA"), after learning that Mayer, who had previously stated in another case that ANDA filing did create reasonable apprehension of suit, was on the panel. *See id.*

51. *See infra* Part II.C (discussing *Phillips v. AWH Corp. (Phillips III)*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc), *cert. denied*, 126 S. Ct. 1332 (2006)).

and there is no evidence that the reversal rates will be significantly decreased.⁵²

B. The Twisted Path of Claim Construction Jurisprudence

The current state of claim construction affairs hails back at least as far as 1995, when the Federal Circuit decided *Markman*.⁵³ In that case, the court concluded that claim construction was a matter of law to be decided by the court.⁵⁴ The rationale for this decision was to remove the uncertainty in patent litigation that could result from juries performing claim construction.⁵⁵ The court later followed *Markman* with *Cybor Corp. v. FAS Technologies, Inc.*,⁵⁶ where the Federal Circuit determined that it would review district court claim construction determinations de novo.⁵⁷ These two principles, that claim construction is a matter of law and that the Federal Circuit reviews claim construction de novo, have been considered unquestionable, although there have been multiple recent suggestions that the court reconsider.⁵⁸

52. For example, a very quick review of Federal Circuit patent cases issued between October 1, 2005, and July 1, 2006, reveals that nearly half of the claim constructions were reversed or modified, many resulting in the need to modify or vacate the district court's holdings. Although this was a quite unscientific study, the main point of interest is that there was certainly not a dramatic, or even noticeable, decrease in the number of claim construction reversals post-*Phillips*.

53. 52 F.3d 967 (Fed. Cir. 1995) (in banc), *aff'd*, 517 U.S. 370 (1996).

54. *Id.* at 976. That claim construction was the province of judges, not juries, was later affirmed by the Supreme Court. See *Markman v. Westview Instruments, Inc. (Markman II)*, 517 U.S. 370, 373-74 (1996).

55. *Markman II*, 517 U.S. at 391 ("Uniformity would, however, be ill served by submitting issues of document construction to juries.").

56. 138 F.3d 1448 (Fed. Cir. 1998) (in banc).

57. *Id.* at 1454.

58. The most prominent example of this groundswell is found in the Federal Circuit's recent denial of a petition for rehearing en banc, in which many judges expressed at least some interest in revisiting the principle. See *Amgen Inc. v. Hoechst Marion Roussel, Inc.*, 469 F.3d 1039, 1045 (Fed. Cir. 2006) (Gajarsa, J. concurring) ("In an appropriate case [Judges Gajarsa, Linn, and Dyk] would be willing to reconsider limited aspects of the *Cybor* decision."); *id.* at 1040 (Michel, C.J., dissenting) ("I have come to believe that reconsideration [of *Cybor*] is appropriate . . ."); *id.* at 1046 (Moore, J., dissenting) ("I believe this court should have taken [the *Amgen*] case en banc to reconsider its position on deference to district court claim construction articulated in [*Cybor*]."); see also *Phillips III*, 415 F.3d 1303, 1330 (Fed. Cir. 2005) (en banc) (Mayer, J., dissenting) ("Now more than ever I am convinced of the futility, indeed the absurdity, of this court's persistence in adhering to the falsehood that claim construction is a matter of law devoid of any factual component."), *cert. denied*, 126 S. Ct. 1332 (2006); cf. *Merck & Co., Inc. v. Teva Pharms. USA, Inc.*, 395 F.3d 1364, 1381 (Fed. Cir.) (Rader, J., dissenting) ("[N]early every judge on this court has publicly professed to

Shortly after giving judges the task of claim construction, the Federal Circuit issued *Vitronics Corp. v. Conceptronic, Inc.*,⁵⁹ an opinion that attempted to provide a hierarchy of data to be considered in claim construction.⁶⁰ First, claim construction must always begin with the language of the claim.⁶¹ Terms in the claim must be given their ordinary and customary meaning as given by a PHOSITA,⁶² unless either the patentee acted as his own lexicographer by assigning an uncustomary meaning to a claim term or the patentee explicitly disavowed the claim scope associated with the ordinary meaning of the term.⁶³ Beyond the claim terms, the district court should consider other intrinsic evidence, such as the written description and the prosecution history.⁶⁴ Claims must be read in light of the written description, which “is the single best guide to the meaning of a disputed term.”⁶⁵ Extrinsic evidence may be used in claim construction when the intrinsic evidence is inconclusive or generally to educate the court about the

accord some level of deference to district courts regardless of [the Federal Circuit’s] de novo review of claim construction issues”), *cert. denied*, 126 S. Ct. 488 (2005).

59. 90 F.3d 1576 (Fed. Cir. 1996).

60. *Id.* at 1582-83.

61. *Id.* at 1582.

62. *Id.*; see also *Brookhill-Wilk 1, LLC v. Intuitive Surgical, Inc.*, 334 F.3d 1294, 1298 (Fed. Cir. 2003) (“The words used in the claims are examined through the viewing glass of a person skilled in the art. In the absence of an express intent to impart a novel meaning to the claim terms, the words are presumed to take on the ordinary and customary meanings attributed to them by those of ordinary skill in the art.” (citation omitted)); *Johnson Worldwide Assocs., Inc. v. Zebco Corp.*, 175 F.3d 985, 989-90 (Fed. Cir. 1999); *Multiform Desiccants, Inc. v. Medzam, Ltd.*, 133 F.3d 1473, 1477 (Fed. Cir. 1998) (“It is the person of ordinary skill in the field of the invention through whose eyes the claims are construed.”).

63. *Vitronics*, 90 F.3d at 1582 (“[A] patentee may choose to be his own lexicographer and use terms in a manner other than their ordinary meaning, as long as the special definition of the term is clearly stated in the patent specification or file history.” (citing *Hoechst Celanese Corp. v. BP Chems. Ltd.*, 78 F.3d 1575, 1578 (Fed. Cir. 1996))); see also *Int’l Rectifier Corp. v. IXYS Corp.*, 361 F.3d 1363, 1370 (Fed. Cir. 2004) (explaining that the presumption that a claim term should be given its ordinary and customary meaning “will be overcome where the patentee, acting as his own lexicographer, has set forth a definition for the term different from its ordinary and customary meaning or where the patentee has disavowed or disclaimed scope of coverage, by using words or expressions . . . representing a clear disavowal of claim scope.”).

64. *Vitronics*, 90 F.3d at 1582-83. However, there is at least the suggestion that if the claim term is unambiguous and clear on its face, there is no need to consider any intrinsic evidence. See *Renishaw PLC v. Marposs Societa’ Per Azioni*, 158 F.3d 1243, 1248 (Fed. Cir. 1998).

65. *Vitronics*, 90 F.3d at 1582.

technology, but it may never be used to vary or contradict the claim language.⁶⁶

Beyond the evidence hierarchy set forth in *Vitronics*, claim construction jurisprudence provides a number of canons of construction to assist in claim interpretation.⁶⁷ Unfortunately, the utility of each of these canons is cabined by subsequent limitations thereof. Canons include that a claim should be interpreted to maintain its validity,⁶⁸ that a correct interpretation rarely excludes the preferred embodiment,⁶⁹ that a narrow construction is preferred to a broad one,⁷⁰ that each claim within a patent should have a different scope,⁷¹ and that limitations cannot be imported from the specification or prosecution history.⁷² For much of the history of judicial claim construction, there was little more guidance than this.

Not surprisingly, with this sparse amount of guidance provided by the Federal Circuit, there remained many questions about the claim construction process: Where is the line between reading the claims in light of the specification and reading in limitations from the specification? Where is the line between using extrinsic evidence to educate the court versus to inform claim construction? How explicit does one have to be in order to be one's own lexicographer or to disavow scope? Who is the PHOSITA and how do

66. *Id.* at 1584.

67. *See* *Athletic Alternatives, Inc. v. Prince Mfg., Inc.*, 73 F.3d 1573, 1578 (Fed. Cir. 1996) ("In addition, a number of canons, such as the doctrine of claim differentiation, guide our construction of all patent claims."). For additional discussion of claim construction canons, see *infra* Part III.

68. *See, e.g.*, *Generation II Orthotics, Inc. v. Med. Tech., Inc.*, 263 F.3d 1356, 1365 (Fed. Cir. 2001) ("[C]laims can only be construed to preserve their validity where the proposed claim construction is 'practicable,' is based on sound claim construction principles, and does not revise or ignore the explicit language of the claims."); *see also Phillips III*, 415 F.3d 1303, 1327 (Fed. Cir. 2005) (en banc), *cert. denied*, 126 S. Ct. 1332 (2006); *Moline Mfg. Co. v. U.S. Int'l Trade Comm'n*, 75 F.3d 1545, 1557 (Fed. Cir. 1996).

69. *See, e.g.*, *Playtex Prods., Inc. v. Procter & Gamble Co.*, 400 F.3d 901, 904 (Fed. Cir. 2005); *Vitronics*, 90 F.3d at 1583-84 (citing *Hoechst Celanese Corp. v. BP Chems. Ltd.*, 78 F.3d 1575, 1581 (Fed. Cir. 1996)).

70. *See, e.g.*, *Housey Pharms., Inc. v. Astrazeneca UK Ltd.*, 366 F.3d 1348, 1356 (Fed. Cir. 2004) (limiting this canon to the "unusual case" where the patentee made two contradictory representations of scope); *Athletic Alternatives, Inc. v. Prince Mfg., Inc.*, 73 F.3d 1573, 1581 (Fed. Cir. 1996).

71. *See, e.g.*, *Multiform Desiccants, Inc. v. Medzam, Ltd.*, 133 F.3d 1473, 1480 (Fed. Cir. 1998) (cautioning that "the doctrine of claim differentiation can not broaden claims beyond their correct scope, determined in light of the specification and the prosecution history and any relevant extrinsic evidence").

72. *See, e.g.*, *Housey Pharms.*, 366 F.3d at 1355; *Burke, Inc. v. Bruno Indep. Living Aids, Inc.*, 183 F.3d 1334, 1340 (Fed. Cir. 1999).

we know what he thinks? How does one determine the ordinary and customary meaning of a claim term?

Oddly enough, it was in attempting to answer this last question—that is, how to determine the ordinary and customary meaning of a claim term—the judges on the Federal Circuit found themselves soundly divided, a division that eventually prompted the Federal Circuit to attempt to clarify its claim construction jurisprudence. In October 2002, the Federal Circuit issued *Texas Digital Systems, Inc. v. Telegenix, Inc.*,⁷³ which represented to many a dramatic change in claim construction jurisprudence⁷⁴ and was initially hailed by the patent bar. Although *Vitronics* had reserved a special place for dictionaries,⁷⁵ *Texas Digital* is considered to have raised dictionaries to the primary source for claim interpretation.⁷⁶ However, as dictionary use at the Federal Circuit grew,⁷⁷ it became clear that not all judges were on board with the changed methodology.⁷⁸ Even within the camp of dictionary-use proponents, there were disagreements as to which words to define, which

73. 308 F.3d 1193 (Fed. Cir. 2002).

74. See, e.g., Holbrook, *supra* note 38, at 148 (noting that *Texas Digital* “represents another step, although perhaps a side-step, in the evolution of claim construction at the Federal Circuit, if not an outright rejection of the *Vitronics* paradigm”); Brenda Sandburg, *Look up Words in a . . . Dictionary? Federal Circuit Zigzags on the Legal Validity of Everyday Definitions*, NAT’L L.J., Feb. 9, 2004, at 12 (asserting that “the Federal Circuit shook things up” when it issued *Texas Digital*).

75. *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1584 n.6 (Fed. Cir. 1996) (noting that although dictionaries and treatises are extrinsic evidence, “they are worthy of special note” and “[j]udges are free to consult such resources at any time . . . to better understand the underlying technology and may also rely on dictionary definitions when construing claim terms, so long as the dictionary definition does not contradict any definition found in or ascertained by a reading of the patent documents”).

76. See Holbrook, *supra* note 38, at 148 (“*Texas Digital* elevated dictionaries to a primary source of identifying the ordinary meaning of a term.”); Joseph Scott Miller & James A. Hilsenteger, *The Proven Key: Roles and Rules for Dictionaries at the Patent Office and the Courts*, 54 AM. U. L. REV. 829, 844 (2005) (pointing out the shift from “a heavy presumption of ordinary meaning to the presumption in favor of a dictionary definition” (internal quotation marks and footnote omitted)).

77. Miller & Hilsenteger, *supra* note 76, at 845-51 (documenting the increase in dictionary usage at the Federal Circuit).

78. See, e.g., Nystrom v. Trex Co., 374 F.3d 1105, 1120 (Fed. Cir. 2004) (Gajarsa, J., dissenting in part) (asserting that the “majority gives heed to the general rules of construction but then proceeds to ascertain the ‘plain and ordinary meaning’ of the term ‘board’ from various dictionaries[, and] establishes a duel between dictionary definitions and then selects one of the various definitions to support its results”), *withdrawn, substituted opinion* at 424 F.3d 1136 (Fed. Cir. 2005).

dictionary to use, which definition within any given dictionary should be chosen, and even when to stop defining.⁷⁹

And so, the notion that *Texas Digital* was going to pave the way for consistent and certain claim constructions rapidly fell apart. The court was left with the muddled principles and canons that had previously existed, along with this newly introduced chaos driven by dictionary use. The two fundamental obstacles to consistent claim construction remained: where does one find the ordinary and customary meaning of a claim term, and to what extent is the specification to be used in interpreting claims. Each side of the dictionary debate found support in its answer to these questions. On one hand, the dictionary is the perfect place to find the ordinary and customary meaning, and the role of the specification is largely to ensure that the patentee has not disavowed or otherwise disclaimed the scope of the claim term as defined in a dictionary, and any other use of the specification invites impermissible reading of limitations into the claims. On the other hand, the argument is that the specification is the best place to determine the ordinary and customary meaning of the term. The judges on the Federal Circuit essentially formed two camps, with each trying to satisfy, at least first, one of the two obstacles.⁸⁰ It was the increased frequency in clashes between these camps that gave rise to *Phillips*.⁸¹

C. Phillips v. AWH Corp.

The *Phillips* case presented the Federal Circuit with an opportunity to clarify its claim construction jurisprudence, particularly as there was a schism between the dictionary-dependent judges and the specification-dependent judges. In particular, the panel majority concluded that the correct interpretation of the disputed term “baffles” excluded structures that

79. See *infra* notes 164-84 and accompanying text.

80. See Nard, *Process Considerations*, *supra* note 47, at 367-71; Wagner & Petherbridge, *supra* note 31, at 1155. Although the factions on either side of the *Phillips* debate do not line up precisely with the divisions noted in these commentators' papers, these groupings are fairly representative.

81. See generally *Phillips v. AWH Corp. (Phillips I)*, 363 F.3d 1207 (Fed. Cir.) (relying primarily on the specification, while dissenting opinion invoked the dictionary), *vacated en banc*, 376 F.3d 1382 (Fed. Cir. 2004) (per curiam), *aff'd in part, rev'd in part, dismissed in part en banc*, 415 F.3d 1303 (Fed. Cir. 2005), *cert. denied*, 126 S. Ct. 1332 (2006); *Nystrom*, 374 F.3d 1105 (relying on dictionary definitions, but dissent argued for more reliance on the specification). It was from these split opinions that the divergent views of the court became clear, leading to the granting of en banc treatment to “resolve issues concerning the construction of patent claims.” See *Phillips II*, 376 F.3d at 1382.

extended at a ninety-degree angle from the wall, based on a variety of instances in the written description that referred to "baffles" as being "disposed at angles which tend to deflect the bullets."⁸² The dissent, on the other hand, argued that the majority had improperly read in a limitation from the specification, noting that "the parties ha[d] stipulated that 'baffles' are a 'means for obstructing, impeding, or checking the flow of something,'" and that the majority had agreed with that stipulation as the ordinary meaning.⁸³ Because there was nothing in the specification to limit or disclaim the ordinary meaning, and because the objective of impact resistance was only one of several objectives of the invention, the dissent concluded that "there is no reason to supplement the plain meaning of the claim language with a limitation from the preferred embodiment" and that the dictionary-derived ordinary meaning should be used.⁸⁴

On petition for rehearing en banc, the Federal Circuit seized this opportunity to "resolve issues concerning the construction of patent claims raised by the now-vacated panel majority and dissenting opinions,"⁸⁵ that is, to resolve the split between the dictionary-dependent and the specification-dependent factions. The en banc order posed seven questions (or eight, counting the question raised by the concurrence) designed to get at the heart of the claim construction controversy,⁸⁶ although a fair summary of the document as a whole might read, "Claim construction, please discuss." Some of the questions were aimed squarely at choosing between the dictionary-dependent and specification-dependent approaches.⁸⁷ Others were directed toward elaborating on one approach or the other.⁸⁸ Finally, the Federal

82. *Phillips I*, 363 F.3d at 1212-14 (citing Steel Shell Modules for Prisoner Detention Facilities, U.S. Patent No. 4,677,798, col.5 ll. 17-19 (filed Apr. 14, 1986) (issued July 7, 1987)).

83. *See id.* at 1216-17 (Dyk, J., dissenting in part).

84. *Id.* at 1218.

85. *Phillips II*, 376 F.3d at 1382.

86. *See id.* at 1382-84.

87. *See id.* at 1383. The first question asks whether "the public notice function of patent claims [is] better served by referencing primarily to technical and general purpose dictionaries . . . or by looking primarily to the patentee's use of the term in the specification." *Id.* The fourth question asks, "Instead of viewing the [competing] claim construction methodologies . . . as alternative, conflicting approaches, should the two approaches be treated as complementary methodologies such that . . . a patentee must satisfy both limiting methodologies in order to establish the claim coverage it seeks?" *Id.*

88. *See id.* Question two presents a laundry list of questions relating to dictionary usage, such as: "What use should be made of general as opposed to technical dictionaries?" and "How does the concept of ordinary meaning apply if there are multiple dictionary definitions

Circuit posed a question about claim construction generally and without regard to the two competing approaches, asking whether, consistent with Supreme Court and Federal Circuit precedent, it is appropriate for the Federal Circuit to defer “to any aspect of trial court claim construction rulings,” and if so, “to what extent.”⁸⁹ Judge Rader, in a concurring opinion, raised the question of whether claim construction is “amenable to resolution by resort to strictly algorithmic rules,” or whether it would be “better achieved by using the order or tools relevant in each case to discern the meaning of terms according to the understanding of one of ordinary skill in the art at the time of the invention.”⁹⁰

Given the ever-growing dissatisfaction with claim construction procedures and the irritation of clients at the uncertainty in patent scope and notice, the patent bar bristled with anticipation.⁹¹ Lawyers and commentators tried to predict the outcome.⁹² Parties ranging from bar associations and legal organizations to corporations and law firms filed amici curiae briefs.⁹³ Seven

of the same term?” *Id.* Question three similarly probes the depths of the specification approach. *See id.*

89. *See id.* Then-Chief Judge Mayer dissented from the en banc order, remarking, “Until the court is willing to reconsider its holdings in [*Markman I*] and [*Cybor Corp.*], that claim construction is a pure question of law subject to de novo review in this court, any attempt to refine the process is futile.” *Id.* at 1384 (Mayer, C.J., dissenting).

90. *Id.* at 1384 (Rader, J., concurring).

91. *See* Sean A. Passino et al., *En Banc Decisions Play Important Role in Recent Patent Cases*, NAT’L L.J., Feb. 28, 2005, at S1 (“[I]f all seven of the issues identified in the [*Phillips*] order were to be decided, then the *Phillips* case would most likely overshadow in importance all previous Federal Circuit opinions since at least [*Markman*].” (citation omitted)); *see also* Christine Hines, *Court Mulls Way to Interpret Patent Terms: ‘Phillips’ May be Biggest Claims Interpretation Case Since ‘Markman’*, NAT’L L.J., Aug. 16, 2004, at 10 (predicting, after issuance of the en banc order, that “[b]ar and trade associations and the PTO are expected to respond in droves to the court’s invitation to file amicus briefs”); *infra* note 94 and accompanying text (discussing the significant interest in the *Phillips* oral argument).

92. For example, consider an entry on patent attorney Dennis Crouch’s blog following the oral argument in *Phillips III*. *See* Dennis Crouch, *Phillips v. AWH: Review of Oral Arguments on Claim Construction Methodology*, PATENTLY-O, Feb. 8, 2005, http://patentlaw.typepad.com/patent/2005/02/phillips_v_awh_.html (predicting, after oral argument, that dictionaries will take on a less-important status).

93. *See Phillips III*, 415 F.3d 1303, 1306-08 (Fed. Cir. 2005) (en banc) (listing amici briefs, including: bar associations, such as the Federal Circuit Bar Association and the American Bar Association; legal organizations, such as the Intellectual Property Owners Association, The Intellectual Property Law Association of Chicago, the American Intellectual Property Law Association, and the Association of Corporate Counsel; corporations, such as Novartis Pharmaceuticals, et al., Intel Corporation, et al., and VISA U.S.A., Inc., et al.; and law firms, such as Sughrue Mion, PLLC and the Association of Patent Law Firms), *cert. denied*, 126 S. Ct. 1332 (2006).

months and thirty-something amici briefs later, the Federal Circuit heard oral argument from the parties as well as the Office of the Solicitor for the Patent Office, before a standing-room only crowd.⁹⁴ After another five months, nearly one year after taking *Phillips* en banc, the Federal Circuit issued the eagerly awaited opinion, which sadly turned out to be nothing worth waiting for.

Instead of embracing the opportunity, the Federal Circuit withdrew to the same unclear method of claim construction that had always existed. In fact, the court made no bones about this retreat—holding out the *Markman* and *Vitronics* cases, as well as the more recent case *Innova/Pure Water, Inc. v. Safari Water Filtration Systems, Inc.*,⁹⁵ the court said: “What we said in those cases bears restating, for the basic principles of claim construction outlined there are still applicable, and we reaffirm them today.”⁹⁶ To reiterate, claims define the invention,⁹⁷ the words of the claim are to be given their ordinary and customary meaning as they would have to a PHOSITA at the time of invention,⁹⁸ and the intrinsic record provides the context in which the PHOSITA would read the claim term.⁹⁹

The question of the hour remained, however, as to how to determine what a term would mean to a PHOSITA. Rather than providing a pragmatic answer, the court regurgitated some well-worn guidelines. To wit, the claims themselves may provide meaning, both by viewing a term in context and by

94. See Eric Yeager, *Case Touted as ‘Battle Over Dictionaries’ Focuses on Whether Narrowing Was Proper*, BNA’S PAT., TRADEMARK & COPYRIGHT J., Feb. 11, 2005, at 357; Aslan Baghdadi, *Meaning What? As Federal Circuit Judges Discussed Role of Dictionaries in Construing Patent Terms, Dream of Definitive Rule Seemed to Fade*, LEGAL TIMES, Apr. 4, 2005, at 18 (describing the line to get “tickets” and the overflow crowd listening to argument via audio feed).

95. 381 F.3d 1111 (Fed. Cir. 2004).

96. *Phillips III*, 415 F.3d at 1312.

97. See *id.* (citing *Innova*, 381 F.3d at 1115; *Vitronics Corp. v. Conceptiontronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996); *Markman I*, 52 F.3d 967, 980 (Fed. Cir. 1995) (in banc), *aff’d*, 517 U.S. 370 (1996)).

98. See *id.* at 1312-13 (citing *Innova*, 381 F.3d at 1116).

99. See *id.* at 1313. The court stated:

It is the person of ordinary skill in the field of the invention through whose eyes the claims are construed. Such person is deemed to read the words used in the patent documents with an understanding of their meaning in the field, and to have knowledge of any special meaning and usage in the field. . . . Thus the court starts the decisionmaking process by reviewing the same resources as would that person, *viz.*, the patent specification and the prosecution history.

Id. (quoting *Multiform Desiccants, Inc. v. Medzam, Ltd.*, 133 F.3d 1473, 1477 (Fed. Cir. 1998)).

virtue of claim differentiation.¹⁰⁰ “[T]he specification is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.”¹⁰¹ The specification not only “necessarily informs the proper construction of the claims,”¹⁰² but also “may reveal a special definition given to a claim term by the patentee that differs from the meaning it would otherwise possess.”¹⁰³ For these reasons, “[i]t is therefore entirely appropriate for a court, when conducting claim construction, to rely heavily on the written description for guidance as to the meaning of the claims.”¹⁰⁴ Consistent with *Vitronics*, the court again relegated extrinsic evidence to a position somewhat less than intrinsic evidence because of its various infirmities, but noted that extrinsic evidence (particularly dictionaries and treatises) can help a court to understand the underlying technology.¹⁰⁵ As the court itself admitted, none of this was particularly earth-shaking: “[T]he principles outlined above have been articulated on numerous occasions”¹⁰⁶

As to dictionary usage, the Federal Circuit seemingly drew a distinction between determining the ordinary meaning of general terms and technical terms, allowing dictionary use for definition of general terms, but discouraging use in technical situations.¹⁰⁷ Although the court implicitly eviscerated the use of dictionaries by this statement, the Federal Circuit did not leave it at that. The court acknowledged, “Consulting the written

100. See *id.* at 1314. The doctrine of claim differentiation assumes that different claims have different scope.

According to the doctrine of claim differentiation, in interpreting the scope of claim 1, a court looks at claim 2. The court notes that claim 2 narrows claim 1 by restricting the biological material to “human” biological material. This aids the judge in determining that claim 1 is *not* limited to human biological material, else the two claims would present a redundancy. Therefore, the court concludes that claim 1 embraces some non-human biological materials.

Paul M. Janicke, *The Crisis in Patent Coverage: Defining Scope of an Invention by Function*, 8 HARV. J.L. & TECH. 155, 187 n.171 (1994); see also 5A Donald S. Chisum, CHISUM ON PATENTS § 18.03[6], at 18-522 to -529 (2005).

101. *Phillips III*, 415 F.3d at 1315 (internal quotation marks omitted) (quoting *Vitronics*, 90 F.3d at 1582).

102. *Id.* at 1316.

103. *Id.*

104. *Id.* at 1317.

105. *Id.* at 1318.

106. *Id.* at 1319.

107. *Id.* at 1314 (extolling dictionary use where “the ordinary meaning of claim language as understood by a person of skill in the art may be readily apparent even to lay judges”).

description and prosecution history as a threshold step in the claim construction process, before any effort is made to discern the ordinary and customary meanings attributed to the words themselves, invites a violation of our precedent counseling against importing limitations into the claims.”¹⁰⁸ However, the court held that the dictionary-heavy approach placed too much reliance on extrinsic sources and not enough on the specification and prosecution history.¹⁰⁹ The *Phillips III* opinion characterized *Texas Digital* as limiting “the role of the specification in claim construction to serving as a check on the dictionary meaning of a claim term if the specification requires the court to conclude that fewer than all the dictionary definitions apply, or if the specification contains a sufficiently specific alternative definition or disavowal.”¹¹⁰ Noting that the dictionary-heavy inquiry is focused on the abstract meaning of the word, rather than the meaning in context, the Federal Circuit concluded that there is then a risk of “systematic overbreadth.”¹¹¹ The court did point out, however, that dictionary use is not precluded and that such sources “are often useful to assist in understanding the commonly understood meaning of words.”¹¹²

And so, the state of claim construction today is barely, if at all, different from the landscape prior to *Phillips*, a fact that Judge Mayer publicized in dissent: “[W]e say nothing new, but merely restate what has become the practice over the last ten years—that we will decide cases according to whatever mode or method results in the outcome we desire, or at least allows us a seemingly plausible way out of the case.”¹¹³ The majority seems hesitant to even try to provide clear guidelines:

[T]here is no magic formula or catechism for conducting claim construction. Nor is the court barred from considering any particular sources or required to analyze sources in any specific sequence, as long as those sources are not used to contradict claim meaning that is unambiguous in light of the intrinsic evidence.¹¹⁴

108. *Tex. Digital Sys., Inc. v. Telegenix, Inc.*, 308 F.3d 1193, 1204 (Fed. Cir. 2002). The *Phillips III* decision also attempts to explain how to avoid this “cardinal sin”—and yet, its instructions are incomprehensible. See *Phillips III*, 415 F.3d at 1323.

109. *Phillips III*, 415 F.3d at 1319-23.

110. *Id.* at 1320.

111. *Id.* at 1321.

112. *Id.* at 1322.

113. *Id.* at 1330 (Mayer, J., dissenting).

114. *Id.* at 1324 (majority opinion).

There has to be a better way to approach claim construction.

III. A LINGUISTICS-BASED APPROACH TO CLAIM CONSTRUCTION

*[S]hared command of a language equips us to know one another's meaning without needing to arrive at that knowledge by interpretation, because it equips us to hear someone else's meaning in his words.*¹¹⁵

Claim construction is, to be sure, a difficult task. “[P]atent[s] consist[] of legal language commingled with technical verbiage, the latter being the pillar on which its meaning stands.”¹¹⁶ Neither legal language nor technical verbiage provides consistent, easily defined terms, and both legal and technical languages are often a field apart from the English language. In fact, Senior Judge Plager of the Federal Circuit has remarked that “reading [patent] claims is an art of sorts, involving half technology and half linguistics.”¹¹⁷ And yet, the Federal Circuit has rarely mentioned linguistics in its claim construction opinions,¹¹⁸ and it certainly did not consider linguistic approaches when it wrote the *Phillips* opinion.¹¹⁹ In fact, this

115. John McDowell, *Wittgenstein on Following a Rule*, in *MEANING AND REFERENCE* 257, 286 (A.W. Moore ed., 1993).

116. M. Reed Staheli, *Deserved Deference: Reconsidering the De Novo Standard of Review for Claim Construction*, 3 MARQ. INTELL. PROP. L. REV. 181, 189 (1999); see also Andrew Auchincloss Lundgren, *Perspectives on Patent Claim Construction: Re-Examining Markman v. Westview Instruments Through Linguistic and Cognitive Theories of Decisionmaking*, 12 U. BALT. INTELL. PROP. L.J. 173, 202-03 (2004) (“Most patents are indeed elaborate instruments, embodying considerable technical knowledge in a wide range of substantive fields.”).

117. S. Jay Plager, *Challenges for Intellectual Property Law in the Twenty-First Century: Indeterminacy and Other Problems*, 2001 U. ILL. L. REV. 69, 71.

118. On the rare occasions when the Federal Circuit has even mentioned the word “linguistics,” it is most often a quotation of or reference to *Multiform Desiccants, Inc. v. Medzam, Ltd.*, 133 F.3d 1473, 1478 (Fed. Cir. 1998), where the Federal Circuit stated, “Courts must exercise caution lest dictionary definitions . . . be converted into technical terms of art having legal, not linguistic, significance.” Other contexts include accusing a litigant of “linguistic chicanery,” *DeMarini Sports, Inc. v. Worth, Inc.*, 239 F.3d 1314, 1334 (Fed. Cir. 2001), or cautioning judges from “imposing their own subjective linguistic values on a public decision,” *K-2 Corp. v. Salomon S.A.*, 191 F.3d 1356, 1370 (Fed. Cir. 1999) (Rader, J., dissenting).

119. Not only did the Federal Circuit fail to consider linguistic approaches in *Phillips III*, it seems that the court completely ignored consistency of claim construction and the related issues of uncertainty in litigation and ineffective public notice. The method espoused in *Phillips III* does nothing to improve these problems.

Article suggests that the Federal Circuit's main failure thus far in its claim construction jurisprudence is that the court is not even asking the right question—what does a term mean, and if we don't know, how do we find out?

Claim construction is, at its core, a search for the meanings of words used in a particular language—that is, the language of patent claims. The most natural place to begin a search for the meanings of words would be linguistics—the study of language—and a search for that “shared command of language.”¹²⁰ This Article suggests that viewing claim construction through the lens of traditional linguistic analysis methodologies would prove to be a better approach. Rather than relying on well-worn and tired claim construction platitudes, the Federal Circuit should provide clear and linguistically sound guidelines for claim construction and thereby improve consistency and decrease the lack of certainty in claim construction. To do so, this Article argues that by formalizing some of the voluntary and involuntary processes of understanding language¹²¹ and by applying these processes to claim construction, the Federal Circuit is more likely to obtain appropriate and consistent definitions of patent claim terms.

A. *Quick Background in Linguistics*

It is difficult, if not deceptive, to attempt to separate the scientific study of language, known as “structural” or “descriptive” linguistics, from other elements of linguistic study, including philosophic, psychological, and anthropological concerns.¹²² Descriptive or structural linguistics, however, more easily lends itself to the creation of guidelines and rules for claim construction and will be the main focus of this Article. Although descriptive or structural linguistics covers a wide range of studies having in common the unconscious psychological mechanisms by which we make and interpret

120. See *infra* Part III.B.1.

121. Arguably, this should be what is already occurring: “A common mechanism underlying [most lawyerly behavior, including rule analysis, advocacy, and cross-examination] is the structure of language and its relationship to precise analysis Lawyers, scholars, and teachers perform these operations naturally, with varying effectiveness, without self-conscious analysis of the intellectual processes.” Irvin C. Rutter, *Law, Language, and Thinking Like a Lawyer*, 61 U. CIN. L. REV. 1303, 1310 (1993). Although performed involuntarily, Professor Rutter—and this paper—argue that formalizing and understanding the process will lead to improved performance. *Id.* at 1303-05.

122. See *id.* at 1312.

utterances in our native language,¹²³ there are three core areas that have relevance to the quest for patent claim term meaning—semantics, syntax, and pragmatics.¹²⁴ Semantics is the discipline within linguistics devoted to the study of the meanings of words and combinations of words.¹²⁵ Syntax studies how phrases and sentences are structured and how these combinations of words then attain meaning.¹²⁶ Pragmatics is the study of language in context, or what meaning is given to a word by a particular reader in a particular situation.¹²⁷ In reading, speaking, and understanding everyday English, a person informally uses components of all of these skills.¹²⁸

At the heart of claim construction is the search for meaning, and so it would seem that semantics is the place to start. A semanticist constructs a theory of what a word means by examining how a native speaker of the relevant language uses that word in combination with other words.¹²⁹ Semantics starts with a basic, but important, assumption: a person's linguistic capabilities are based on the knowledge he has.¹³⁰ In particular, there is an abstract notion about what words mean based on prior encounters with the term. From this abstract notion, a contextual definition can then be formed based on the particular circumstances in which the word arises for this encounter, which then may provide a refined abstract notion directing a subsequent encounter. For example, if someone hands a child a round article of food and tells the child it is a "cookie," the child, based on prior

123. Elizabeth Fajans & Mary R. Falk, *Linguistics and the Composition of Legal Documents: Border Crossings*, 22 LEGAL STUD. F. 697, 699 (1998).

124. The five areas are phonology (pronunciation), morphology (word formation), syntax (combination of words and phrases), semantics (meaning), and pragmatics (language in context). *See id.* at 699-700.

125. *See* GEORGE L. DILLON, INTRODUCTION TO CONTEMPORARY LINGUISTIC SEMANTICS 1 (1977); JAMES R. HURFORD & BRENDAN HEASLEY, SEMANTICS: A COURSEBOOK 1 (1983).

126. *See* ANDREW CARNIE, SYNTAX: A GENERATIVE INTRODUCTION 3-4 (2002).

127. *See* JOHN I. SAEED, SEMANTICS 17-18 (1997).

128. This use of common components, or a universal grammar, is common to all speakers; however, these common components are in contrast to deep structures, which are attributes of language which human beings generally do not share—the human linguistic ability that exists in the mind of the speaker and the rules that are part of the speaker's unconscious knowledge. *See* NOAM CHOMSKY, ESSAYS ON FORM AND INTERPRETATION 2-3 (1977); NOAM CHOMSKY, STUDIES ON SEMANTICS IN GENERATIVE GRAMMAR 11-12, 65-67 (1972); NOAM CHOMSKY, LANGUAGE AND MIND 12-20 (1968).

129. Clark D. Cunningham, *A Linguistic Analysis of the Meanings of "Search" in the Fourth Amendment: A Search for Common Sense*, 73 IOWA L. REV. 541, 545 (1988).

130. *See* SAEED, *supra* note 127, at 1.

experience, will be expecting the article of food to be sweet and tasty. If the child has had only chocolate chip cookies prior to this encounter, the child may even be expecting chocolate chips to be baked in the cookie. However, if the cookie this time is instead a peanut butter cookie, the child will refine his notion of cookie to include both peanut butter and chocolate chip cookies, but the conventional understanding of “cookie” as a sweet and tasty round treat will remain.¹³¹

As an example of this dual level of interpretation applied to claim construction, consider *Merck & Co. v. Teva Pharmaceuticals USA, Inc.*¹³² In that case, the claim term at issue was “about,” as in the phrase of “administering [a dosage of] about 70 mg.”¹³³ Although the court considered the context of the specification to determine that the patentee had not provided a non-conventional definition, there was no consideration of the technology area or the context surrounding the term in the claim.¹³⁴ The Federal Circuit simply concluded, in the abstract, that the ordinary meaning of “about” was “approximately.”¹³⁵ The court then considered the contextual meaning of “about” when it considered how “approximate” an infringing product needed to be to the patented invention to fall within the claim scope. Even though there was not an explicit, dual level of interpretation, it is clear the first definition was simply reflective of the judges’ common understanding of the everyday term “about.” Although it is not explicit in every case, nearly every claim construction performed by the court involves the first layer of explicating the court’s collective common understanding of a claim term—whether obtained by searching the judges’ personal lexicons or by consulting a dictionary.

Beyond the concern that the Federal Circuit does not explicitly perform a two-step claim construction, focusing on first the abstract and then the contextual, the court more importantly neglects other basic aspects of linguistic analysis. For example, the idea of an extant lexicon of conventional

131. To be fair, this idea of abstract/conventional definition and contextual definition is a bit simplistic. In reality, there may first need to be a contextual understanding to arrive at the correct conventional understanding. For example, returning to the “cookie” example, if instead the situations surrounding the mention of the word were a person trying to detect spyware on his computer, the term would have an entirely different conventional meaning. However, for the purposes of discussion, this Article will refer to the simplified dichotomy of first, obtaining a conventional/common understanding of a term, and second, refining that understanding.

132. 395 F.3d 1364 (Fed. Cir.), *cert. denied*, 126 S. Ct. 488 (2005).

133. *Id.* at 1366, 1369-70.

134. *Id.* at 1369-72.

135. *See id.* at 1372.

understanding of many words is all but absent in the Federal Circuit's claim construction jurisprudence. Even with respect to common words, or words used in their conventional sense, the court denies this underlying knowledge, preferring to start the claim construction anew, as though it had had no previous encounter with the word. In fact, the court has even resorted to dictionaries to purportedly "define" words for which the judge certainly already has developed a conventional, or common, understanding, rather than using the dictionary to obtain an abstract understanding of those words it has not previously encountered.

As to refining the abstract notion to craft a contextual definition of the disputed term, the Federal Circuit's methodology does no better. First, when construing claims, the Federal Circuit typically views the matter as one of a word or a small combination of words.¹³⁶ In doing so, the court may be neglecting another area of linguistics that is crucial to understanding language—syntax. We gain considerable insight into meaning based on the placement of words in phrases or sentences. By simply defining words in the abstract, we are unable to use our syntactical intuitions to our benefit. Second, although the Federal Circuit has repeatedly stated that claim terms should be given the meanings they would have had to a PHOSITA,¹³⁷ the Federal Circuit has removed (in practice, if not in name) the PHOSITA from much of its claim construction process.¹³⁸ Pragmatics, a third area of linguistic analysis, is intimately tied to the contextual understanding of terms and the PHOSITA. In concluding its claim construction by defining a singular word or phrase in a vacuum, ignoring the PHOSITA, and denying that it has some previous knowledge of many words, the Federal Circuit is disregarding many of the linguistic intuitions that everyday speakers and listeners use to understand language, which may lead to inaccurate claim interpretations and decreased public notice.¹³⁹

136. Cf. Burk & Lemley, *supra* note 4, at 41 (talking specifically about what constitutes an "element" for the purposes of infringement analysis). Although the definition of an "element" is potentially different than choosing a word or phrase for claim construction purposes, the idea behind the matter of arbitrarily chunking a patent claim for any purpose is problematic and often overlaps. See *id.* at 46 ("[T]he natural tendency of courts is to identify the elements for which literal infringement is lacking as the same elements for which it construed the claims.").

137. See *Phillips III*, 415 F.3d 1303, 1313 (Fed. Cir. 2005) (en banc) ("The inquiry into how a person of ordinary skill in the art understands a claim term provides an objective baseline from which to begin claim interpretation."), *cert. denied*, 126 S. Ct. 1332 (2006).

138. See *infra* Part III.B.4.

139. The concern has been raised that the PHOSITA is not an everyday speaker/listener and thus this analysis fails. Presumably, the PHOSITA uses the same

B. Applying Linguistics to Claim Construction

Linguistics, as a science, has already validated the use of various tools and theories to understand language. Because of this, there are at least five notions from linguistics that can help shape a more consistent claim construction methodology: (1) every reader, including a judge, possesses a mental lexicon with a common sense (or conventional) understanding of word meaning, which is a point from which to start when interpreting claims; (2) there is an appropriate place for dictionary usage, which is to inform the judge's common sense understanding about a word where he has none; (3) patent claims have their own grammar that must inform the syntactical and contextual analysis, but may also skew the reader's common understanding that was obtained either from a mental lexicon or from a dictionary; (4) regardless of the common sense understanding, the PHOSITA must be returned to the analysis and changes must be made to the law to effectuate the return of the PHOSITA; and (5) extensive resort to the specification and prosecution history to divine the patentee's intent is inappropriate.

The first two prongs of the proposal are focused on the conventional, or common, definition of terms, or the definition of words in the abstract, as discussed above. The remaining three prongs are focused on the second level of definition, refining the definition based on the context.

1. The Patent Lexicon

One premise of understanding language is the notion that the listener/reader¹⁴⁰ is not interpreting the language in a vacuum—every reader has an internal mental lexicon or dictionary from which interpretation begins.¹⁴¹ Although this lexicon is lacking in context, it can provide a starting

linguistic intuitions as the everyday speaker or listener, defining words based on an abstract notion refined by context, and brings only a difference in background knowledge to the table. It is unlikely that a PHOSITA would interpret words by a wholly different procedure.

Furthermore, the canons of claim construction arguably effectuate some of the goals for claim construction and mitigate some of the Federal Circuit's failures as discussed in this Article, but because the canons are not uniformly employed and are hampered by limitations on their usage, they do not fulfill the goals with sufficient certainty. This Article proposes that the canons of claim construction can be used in conjunction with the linguistic methods described herein to improve claim construction methodology.

140. This point is actually true of the listener/reader, as well as the speaker, who formulates language based on this mental lexicon. For simplicity, the person attempting to interpret the term will hereinafter be referred to as the reader.

141. See SAEED, *supra* note 127, at 8.

point for claim construction by providing the conventional, or common sense, definition of a word that is then refined via contextual analysis. Although every speaker may not define a term identically, for words to have meaning, the definition must stay within a common boundary when referring to reality. It is to this conventional definition that contextual refinement is then added to arrive at a complete definition.

As Professor Irvin Rutter explains, what we know about the non-verbal world is obtained from our senses—sight, hearing, taste, touch, and smell.¹⁴² If a person sees an object, such as a cave, that person “would simply experience a visual perception, that is, there would be an image or picture in his mind’s eye.”¹⁴³ This would be the primary response to a visual stimulus.¹⁴⁴ If that person had previously seen a cave, Professor Rutter explains, there would be a “secondary, associated response,” which would depend on the person’s prior experiences and associations.¹⁴⁵ Similarly, in the verbal world, if someone would instead utter the word “cave,” the person’s primary response would be a primary response to sound; the secondary response would be the evocation of the prior experience of seeing the cave.¹⁴⁶ For our purposes, then, upon hearing a word, our secondary response (after a primary response of processing the auditory stimulus) will be to make the association between the verbal utterance and the experiential knowledge we have of that word. That experiential knowledge provides us with a common understanding or conventional meaning of the word, from which we can then layer context.

In claim construction, it is helpful to think of the Federal Circuit as a collective entity, which has obtained, over the course of life and interpretive experience, a conventional or common understanding of many terms, or to put it another way, a lexicon of “ordinary and customary meaning.” Unlike with an average reader, the Federal Circuit has provided insight into its lexicon of ordinary and customary meaning via its precedent. This Article posits that by gathering a lexicon based on claim constructions rendered by

142. See Rutter, *supra* note 121, at 1317.

143. *Id.* at 1317-18.

144. See *id.* at 1318.

145. *Id.* (noting that the person, for example, might experience a secondary response of comfort and relaxation based on having entered the cave to escape the rain).

146. See *id.* at 1319. In this complex conversion, then, between the nonverbal and the verbal world, there are certainly philosophic, psychological, and anthropological underpinnings that cannot be ignored, but this Article leaves those topics for another day and focuses solely on structural linguistics and a practical approach to claim interpretation.

the Federal Circuit,¹⁴⁷ to be used not to define, but to gain insight into the collective conventional definitions of common words by the court, two improvements will be attained. First, claim construction, as a matter of law, will truly become more like other areas of law, where precedent about term definitions can be argued in a subsequent, unrelated case. This is tempered, of course, by the context in which the term is used, though the first layer of claim construction is rarely about context. Second, applicants when drafting patents will have some idea of the conventional understanding had by judges as to many of the common words used in patent claims and can craft claims accordingly.¹⁴⁸ Certainly, there is no benefit at this time for the Federal Circuit to be repeatedly construing the term “about” as “approximate.”¹⁴⁹

One common criticism of this idea is that there will be little value in such lexicon because the Federal Circuit is defining complex, technical terms that are highly specialized to the particular invention. However, an interesting insight obtained during the creation of this lexicon is that it is clear that this is not the case.¹⁵⁰ Most of the terms the court construes are not technical terms.¹⁵¹ Because many terms being construed by the Federal Circuit fall into the category of non-technical terms (and in some cases, are identical to terms already construed, such as “about”), there is value in considering the Federal Circuit’s case law as a sort of lexicon reflecting the judges’ common, conventional understanding of terms. Of course, in any case, the conventional meaning must be tempered by context, but the conventional

147. I have already begun work in gathering this lexicon, which is on file with the author. Inquiries and comments about the lexicon are welcome at kosenga@richmond.edu as its creation continues.

148. One concern raised is that there may be a time lag following the creation of the lexicon in which the conventional meanings of the terms may change. In response, the lexicon is envisioned as a vibrant project that is regularly updated to reflect the judges’ current mental lexicon. Moreover, and more importantly, the court is often defining terms that are not technical and are not susceptible to regular changes in meaning. See *infra* notes 151, 162, and text accompanying notes 169-71.

149. Hedge terms such as “about” or “substantially” may represent a grammaticalization—that is, the term has lost its substantive meaning and has instead become part of the necessary grammatical structure. Even if this is true, there are still a significant number of common, everyday words being defined on a regular basis by the Federal Circuit that provide value to the notion of a lexicon.

150. There are also likely other by-products and insights provided by the collection of Federal Circuit claim construction into a lexicon, but these topics warrant further research and are beyond the scope of this paper.

151. For example, in 2006, the Federal Circuit construed terms such as “conventional,” “about,” “combining,” and “specified time interval.” See Lexicon Database (on file with author). In fact, in *Markman*, the granddaddy of all claim construction cases, the term at issue was “inventory.”

meaning provides the starting point. This Article does not suggest that this lexicon be used prescriptively, or even to define terms; rather, it simply represents the clearest picture we have into the judges' personal collective internal lexicon, which should help patent drafters to draft claims that will be understood as intended.

The Federal Circuit has arguably, but silently, blessed this approach for words in which all that is sought is the ordinary and customary meaning (or linguistically, the conventional meaning). In *PC Connector Solutions LLC v. SmartDisk Corp.*,¹⁵² the magistrate at the district court level defined the disputed term "conventional" as referring to technologies existing at the time of the invention,¹⁵³ by relying on the construction of that same term in *Kopykake Enterprises, Inc. v. Lucks Co.*¹⁵⁴ The Federal Circuit agreed that the ordinary and customary meaning of "conventional" was exactly as the district court had found, thus implicitly blessing that the ordinary and customary meaning of a claim term can be derived from precedent.¹⁵⁵

However, the Federal Circuit has, in other cases, rejected the idea of "precedent" in claim construction. For example, in *Medrad, Inc. v. MRI Devices Corp.*,¹⁵⁶ Medrad, a medical device company, argued for a construction of the term "substantially uniform" to be "largely, but not wholly, the same form throughout," based on the Federal Circuit's construction of that term in a different case having to do with detergent.¹⁵⁷ Noting that the "use of a term in a patent on a detergent is of little pertinence to the use of a similar term in a patent on MRI RF coils," the court instead defined (or perhaps declined to define) the term to mean "sufficiently uniform" for the function.¹⁵⁸ The Federal Circuit admonished that "[a] particular term used in one patent need not have the same meaning when used in an entirely separate patent, particularly one involving different technology. In fact, there are many situations in which the interpretations will necessarily diverge."¹⁵⁹ However, in issuing this pronouncement, the court pointed to situations where the "patentee may define a particular term in a particular way," as well as when the term has a meaning that varies from

152. 406 F.3d 1359 (Fed. Cir. 2005).

153. *Id.* at 1361.

154. 264 F.3d 1377 (Fed. Cir. 2001).

155. *Connector*, 406 F.3d at 1363.

156. 401 F.3d 1313 (Fed. Cir. 2005).

157. *See id.* at 1318 (noting that Medrad based its construction on the Federal Circuit's construction of "substantially uniform" in *Ecolab, Inc. v. Envirochem, Inc.*, 264 F.3d 1358, 1361 (Fed. Cir. 2001)).

158. *Medrad*, 401 F.3d at 1319-20.

159. *Id.* at 1318.

art to art.¹⁶⁰ If neither of these situations are true, the court in *Medrad* still cautions that “[e]ven absent an express definition of a term in the specification or prosecution history, or a clearly established understanding of the meaning of the term in the art, the manner in which the term is used in the patent may dictate a definition that differs from the definition that would be given to the same term in a different patent with a different specification or prosecution history.”¹⁶¹

The Federal Circuit is not explicitly denying that there is a general understanding of terms, just that it requires a look at context. However, this does not defeat the value of the lexicon for the first level of claim construction—obtaining the conventional definition of a common, everyday English word. In these cases, the court is not pronouncing the use of a term in a particular context, but rather expounding on the conventional, or ordinary and customary, meaning of a term, such as “substantially” or “connected” or “conventional.”¹⁶² In these cases, there is no reason why a lexicon of terms defined by the Federal Circuit cannot serve as at least a cautionary guide. The lexicon should not be used where the court is instead defining a term in context, and moreover, care should be taken to consider the field of art at issue, which can shape even the ordinary and customary meaning of a particular term.¹⁶³

2. Dictionary Usage

What if the term is one that has not been previously encountered? This is the situation in which dictionary usage makes linguistic sense—to obtain a conventional understanding for a word where we have none. Interestingly, and not unique to the Federal Circuit, this is not how courts most often use dictionaries.

Resorting to a dictionary to define a term is natural: “[J]udges habitually turn to dictionaries when faced with indeterminacy in interpreting . . .

160. *Id.*

161. *Id.*

162. Other scholars have noted additional mundane words that the Federal Circuit has recently defined. *See* Burk & Lemley, *supra* note 4, at 53 (noting that the court has considered disputes over the terms “a, or, to, on, about, including, and through” (internal quotation marks and footnotes omitted)).

163. *See, e.g., supra* note 131 and accompanying text (cautioning that defining the term “cookie” in its conventional sense does require one to know whether we are talking about food or computer files).

sentences.”¹⁶⁴ However, in practice, this habit is not about defining a word, but rather about verifying a meaning. Professor Craig Hoffman explains the difference as follows: “definition” is using a dictionary to define a word that the reader does not know, while “verification” is using a dictionary to verify that a common English word has a meaning that the court has chosen to assign it.¹⁶⁵ In verifying, the judge will pronounce a legal conclusion about a sentence, identify a “language problem” with the text and focus on a potentially problematic word in that text, and will cite one or more dictionary definitions to support the conclusion that the problematic word has the meaning originally asserted.¹⁶⁶ Rather than serving as a prospective inquiry into a word’s meaning, verification is, at best, an innocent retrospective search for validity of a judge’s common sense understanding of the English language and, at worst, a result-driven no-holds-barred mission to justify and rationalize the chosen meaning for a term.¹⁶⁷ Thus, verification, although occasionally harmless, at the very least raises a specter of impropriety in the court’s construction.

An examination of claim construction in the Federal Circuit shows that the court uses dictionaries largely for verification rather than definition.¹⁶⁸ Dictionaries are used most often, in fact, when the word being defined is a simple word that most judges, and indeed most native English speakers, would never dream of looking up in a dictionary. For just a few of the many possible examples, the Federal Circuit has used a dictionary to define: “Pot . . . as a rounded metal or earthen container of varying size used chiefly for domestic purposes”;¹⁶⁹ “[v]isual . . . as capable of being seen”;¹⁷⁰ and

164. Craig Hoffman, *Parse the Sentence First: Curbing the Urge to Resort to the Dictionary When Interpreting Legal Texts*, 6 N.Y.U. J. LEGIS. & PUB. POL’Y 401, 401 (2003).

165. *Id.* at 402.

166. *Id.* at 417.

167. Arguably, there is a third use for dictionaries, beyond definition and verification—that is, to determine whether a word for which you have a conventional understanding has additional, acceptable usages. This is particularly true in exploring the nuanced contours that might exist for everyday words. However, as it would be difficult to separate this use from verification, I still conclude that dictionary use should be reserved for those words for which the judge has no conventional, ordinary and customary understanding.

168. See generally Miller & Hilsenteger, *supra* note 76 (commenting on dictionary usage at the Federal Circuit).

169. *Prima Tek II, L.L.C. v. Polypap, S.A.R.L.*, 412 F.3d 1284, 1288 (Fed. Cir. 2005) (internal quotation marks omitted) (quoting WEBSTER’S THIRD NEW INTERNATIONAL DICTIONARY 1774 (2002)).

170. *Gemstar-TV Guide Int’l, Inc. v. Int’l Trade Comm’n*, 383 F.3d 1352, 1366 (Fed. Cir. 2004) (internal quotation marks omitted) (quoting WEBSTER’S THIRD NEW INTERNATIONAL DICTIONARY 2558 (1993)).

“connect as to join, fasten or link together usually by means of something intervening.”¹⁷¹

While these verifications of claim terms may seem harmless, dictionary use in other cases at least appears to introduce impropriety. Consider, for example, the Federal Circuit opinion in *Novartis Pharmaceuticals Corp. v. Eon Labs Manufacturing, Inc.*¹⁷² There, the court was seeking to construe the term “hydrosol.” The court consulted a dictionary, which defined “‘hydrosol’ as ‘a sol in which the liquid is water.’”¹⁷³ The court then looked up “sol,” which was defined as “a dispersion of solid particles in a liquid colloidal solution.”¹⁷⁴ From here, the court went on to look up “solution.”¹⁷⁵ The word “solution” in the dictionary chosen by the court provided two relevant definitions, one broad and one narrow. The Federal Circuit chose the narrow definition, despite a lack of disavowal of claim scope that would prohibit choosing the broader definition.¹⁷⁶ The narrow definition, in turn, included the term “medicinal preparation,” a term that the Federal Circuit not only felt compelled to construe, but also resorted to an entirely different dictionary in order to do so, resulting in what the court determined was an ambiguity.¹⁷⁷ Not only did the Federal Circuit chain together a series of definitions in what seems to be an attempt to arrive at a common denominator that suited the preferred outcome, but the court also inexplicably switched dictionaries midstream, citing *Webster’s Third New International Dictionary*, *The Oxford English Dictionary*, and *Merriam-Webster’s Medical Dictionary*.¹⁷⁸ Judge Clevenger dissented, noting: “Dictionaries are fine tools to assist in the exercise of claim interpretation, for sure, but in this case the majority has simply overworked the dictionaries to a point of error.”¹⁷⁹

171. *Searfoss v. Pioneer Consol. Corp.*, 374 F.3d 1142, 1149 (Fed. Cir. 2004) (internal quotation marks omitted) (quoting WEBSTER’S THIRD NEW INTERNATIONAL DICTIONARY 480 (1986)).

172. 363 F.3d 1306 (Fed. Cir. 2004).

173. *Id.* at 1308 (quoting WEBSTER’S THIRD NEW INTERNATIONAL DICTIONARY 1110 (2002)).

174. *See id.* at 1309 (internal quotation marks omitted) (quoting WEBSTER’S THIRD NEW INTERNATIONAL DICTIONARY 2167 (2002)).

175. *See id.*

176. *See id.*

177. *See id.* at 1309-10; *id.* at 1315 (Clevenger, J., dissenting).

178. *See id.* at 1309 (majority opinion); *id.* at 1315 (Clevenger, J., dissenting).

179. *Id.* at 1316 (Clevenger, J., dissenting). It is important to note that Judge Clevenger, at the time of *Novartis*, was not anti-dictionary, having used dictionaries for claim construction on other occasions in his opinions. *See, e.g., Housey Pharms., Inc. v. Astrazeneca UK Ltd.*, 366 F.3d 1348, 1353-54 (Fed. Cir. 2004) (accepting a party’s dictionary-based claim construction argument over dissent by Judge Newman, arguing against the majority’s reliance

There are other instances where the court has cited different dictionaries for different terms without explanation, and at least one time for adjacent words in the same claim term. In *Edwards Systems Technology, Inc. v. Digital Control Systems, Inc.*,¹⁸⁰ the court was defining the term “semipermeable membrane.” After concluding that there was no reason to give “semipermeable membrane” anything other than its ordinary meaning, the Federal Circuit continued: “The term ‘semipermeable’ means ‘[p]artially permeable’ or ‘[a]llowing passage of certain, esp. small molecules or ions but barring others.’ ‘Membrane’ is defined as ‘a thin soft pliable sheet or layer esp. of animal or vegetable origin.’”¹⁸¹ It is unclear why the court would change dictionaries midstream, since the court admitted it was only seeking the ordinary meaning and since both terms appear in each dictionary, other than to obtain a definition that comported with the result the panel sought. This is exemplary of verification at its best (or worst).

The *Phillips* court, unfortunately, incorrectly stresses that this very situation—the simple, non-technical word—is precisely the situation in which the court finds dictionary use to be appropriate, noting that “general purpose dictionaries may be helpful” in cases where “the ordinary meaning of claim language as understood by a person of skill in the art may be readily apparent even to lay judges.”¹⁸² On this point, the Federal Circuit has gotten the approach completely wrong. Dictionaries should be used in claim construction only to define those words for which a judge has no common understanding. In many cases, that situation would be one in which the disputed term is “technical verbiage,” although, on occasion, it is conceivable that a judge may not be versed in a peculiar use of a general English term within a given field of art. If the use of dictionaries is then largely limited to technical terminology, it would seem that a context-specific dictionary, rather than a general dictionary, would be most appropriate. The other shortcomings of dictionaries would still apply,

on dictionaries); *Boehringer Ingelheim Vetmedica, Inc. v. Schering-Plough Corp.*, 320 F.3d 1339, 1346 (Fed. Cir. 2003) (starting the claim construction analysis by noting that “[d]ictionary definitions frequently are useful in th[e] process” of determining the ordinary and customary meaning of a claim term).

180. 99 F. App’x 911 (Fed. Cir. 2004). Although the Federal Circuit restricts the citation of unpublished opinions, the fact that this example of apparent dictionary-shopping appears in a non-precedential opinion does not decrease its illustrative value.

181. *Id.* at 918-19 (alterations in original) (quoting THE AMERICAN HERITAGE COLLEGE DICTIONARY 1240 (1997) for the definition of “semipermeable” and WEBSTER’S THIRD NEW INTERNATIONAL DICTIONARY 1408 (1986) for the definition of “membrane”).

182. See *Phillips III*, 415 F.3d 1303, 1314 (Fed. Cir. 2005) (en banc), *cert. denied*, 126 S. Ct. 1332 (2006).

however. Questions remain as to which particular dictionary, which edition of the particular dictionary, and which definition or definitions in that dictionary to choose.¹⁸³ Especially in the technical fields, there may be somewhat of a battle of the dictionaries or even a question of whether a particular document, such as a list of definitions created by a standards-setting organization, should be held to the same esteem.¹⁸⁴

Another problem that dictionaries bring to bear is when to stop defining, a problem that is not mitigated necessarily if dictionaries are limited to technical terms for which the judge has no common understanding, such as the term “hydrosol” in the *Novartis* case. In that case, arguably, “hydrosol” fits under the criteria for dictionary use. The resulting definition includes “sol,” which too may fit under the criteria. Although the Federal Circuit then looked up “solution,” which seemingly does not fit the criteria, it may have been within the parameters if it had chosen to look up “colloidal”—a term also included in the definition of “sol.”

Dictionary use is only appropriate where the judge has no conventional definition for the term in question. These situations could include cases involving technical terms with which the judge is unfamiliar or cases where typical English terms have taken on technical meanings that vary from conventional understanding (such as “cookie” in the computer arts). Under no circumstances should dictionaries be used to define (or rather verify) conventional English words in their traditional usage.

Whether the conventional, or ordinary and customary, meaning of the term is gleaned from the Federal Circuit’s collective lexicon or looked up in a dictionary, this represents only the first step of claim construction. The abstract conventional meaning must then be refined and reined in based on

183. These concerns are not limited to the Federal Circuit’s use of dictionaries. *See, e.g.,* Samuel A. Thumma & Jeffrey L. Kirchmeier, *The Lexicon Has Become a Fortress: The United States Supreme Court’s Use of Dictionaries*, 47 BUFF. L. REV. 227, 285-86 (1999) (discussing problems with Supreme Court’s use of dictionaries); Rickie Sonpal, Note, *Old Dictionaries and New Textualists*, 71 FORDHAM L. REV. 2177, 2197 (2003) (same).

184. Standards-setting organizations (“SSOs”) are organizations or institutions that create standards, at either national, transnational, or international levels. *See* Wikipedia, Standards Organization, http://en.wikipedia.org/wiki/Standards_organization (last visited Feb. 18, 2007). The standards can either concern broad or narrow subject matter, and they are typically concerned with either creating standard interfaces or standards for quality and safety. *See id.* Exemplary SSO work includes W3C (World Wide Web Consortium), creating standards for Internet matters, and IEEE (Institute of Electrical and Electronics Engineers), which creates standards for a wide variety of electronic products and processes, such as wireless transmission. *See id.*

the context that surrounds the term. This second step of claim construction, contextual analysis, finds bases in both syntactical and pragmatic analysis.

3. The Grammar of Patents

Part of our understanding of English sentences is based on syntactic ordering. That is, words appear where we expect them to appear and usually in the context in which we expect them. For example, we can understand the sentence, "The rose grew in the garden." We begin to lose some of that understanding when the words are rearranged, although the parts of speech of the various words are still in the same place: "The garden grew in the rose." We lose even further understanding when words are used in unexpected ways and where the words lose their part-of-speech identity: "The grew garden rose in the."

Unfortunately, either due to the difficulty in describing something in a single sentence or the difficulty in describing something for which there may be no words, patentees often use words in unexpected ways. For example, words are frequently used outside of their typical parts of speech or are combined with other words that are not normally associated together. Some people may argue that this is the beauty of the English language. We are likely to form a reasonably accurate mental picture at hearing a sentence such as: "The children kangarooed off the wall."¹⁸⁵ Although the judge may have a sufficient understanding of what a word typically means, when the word is used out of context or as a different part of speech, the term loses some of its descriptive precision at the very least. However, it is this very level of precision that is required in defining the patentee's rights and providing sufficient notice to the public.

In some cases, we may be able to reflexively read the sentence, moving the term to a sentence position with which we are more familiar. For example, the Federal Circuit had the opportunity to define the term "glide surface."¹⁸⁶ Although the court was not perplexed by the use of "glide" as an adjective, rather than its traditional usage as a verb or noun, one of the parties at least made an argument that the noun form, not the verb form, should be used.¹⁸⁷ But it is possible to read this phrase as "surface on which

185. Thank you, Kelly Brest van Kampen, for this example.

186. See *Vanderlande Indus. Nederland BV v. Int'l Trade Comm'n*, 366 F.3d 1311, 1317-24 (Fed. Cir. 2004).

187. *Id.* at 1321 ("Vanderlande's argument rests on a long series of tenuous assumptions: the word 'glide' in the claim term 'glide surface' is based on the noun form, not the verb form . . .").

the object glides," or another similarly framed statement.¹⁸⁸ Not all phrases, however, permit a similar reordering. Moreover, in so reordering, it is possible that the true meaning is lost in translation.

Linguistic intuitions, such as those derived from syntax, are the key to sentence meaning.¹⁸⁹ Current linguistic theory hypothesizes that all mature speakers in a language share a common grammar, i.e., the internalized set of rules that guides language production and interpretation.¹⁹⁰ Sentence interpretation is more than defining the words that comprise it—rather, the key is to understand how the grammar generates and interprets the syntactic and semantic relationships among the phrasal categories that the sentence contains.¹⁹¹ Professor Hoffman provides the following simplified example as descriptive of the way grammar evokes linguistic intuitions that lead to meaning:

- 2.(a) John thinks he won.
- (b) He thinks John won.

. . . [I]n Sentence 2(a), the pronoun "he" may refer to John or some other man. . . [I]n Sentence 2(b), the pronoun "he" cannot refer to John but can only refer to another man. . .

- 3. After he ate lunch, John left.

. . . "[H]e" in Sentence 3 may refer to John, whereas the pronoun in Sentence 2(b) cannot. Why is that so? . . . By comparing these sentences, and analyzing their similarities and differences, linguists can test their hypotheses about what those rules might be.¹⁹²

188. It is not practical, however, to insist that the patentee rewrite the claim as suggested, because the term "glide," in addition to serving as a descriptor, also serves as an identifier, so that other surfaces may be discussed as well. For example, in the peanut butter and jelly sandwich example above, there are "perimeter surfaces" and "contact surfaces." See *supra* note 18. The terms "perimeter" and "contact" not only describe where these surfaces are likely located, but also serve to differentiate them from each other.

189. See Hoffman, *supra* note 164, at 406.

190. See DAVID LIGHTFOOT, *THE LANGUAGE LOTTERY: TOWARD A BIOLOGY OF GRAMMARS* 22-24 (1982); Stephen R. Anderson & David W. Lightfoot, *The Human Language Faculty as an Organ*, 62 ANN. REV. PHYSIOLOGY 697, 697 (1999).

191. See JANET DEAN FODOR, *SEMANTICS: THEORIES OF MEANING IN GENERATIVE GRAMMAR* 160 (1977).

192. Hoffman, *supra* note 164, at 407.

Patent drafting rules do provide some guidance in this area, especially with respect to an antecedent basis. Specifically, a claim will be found indefinite under 35 U.S.C. § 112 if the claim recites language lacking an antecedent basis. Consider the following exemplary claim: “A chair comprising a back member, a seat member, and a plurality of vertical support members, where the chair legs are made of wood.”¹⁹³ Arguably, the term “legs” is an alternate reference to “vertical support members,” just as “he” in example 3 above may refer to “John.” However, like example 3, “he” is not clear—it could mean either John or some other man; both are indefinite because the “pronoun,” or unspecific term, lacks antecedent basis. In the case of the chair, while “legs” may be included within the realm of “vertical support members,” the terms are of arguably different scope and cannot be used to represent the same thing.¹⁹⁴ Similarly, the antecedent basis requirement of patent law prohibits referring to an element as “the” element, without first having introduced the element as “an” element. That is, a claim may not read, “A chair comprising a seat member, a back member, and the plurality of legs.” In this case, the element “plurality of legs” has not been initially introduced with an “an,” so the specific reference to “the” plurality of legs lacks antecedent basis.¹⁹⁵ Despite avoiding indefiniteness based on antecedent basis, there remain instances where syntactic analysis and linguistic intuitions based on word ordering would assist claim interpretation.

The Federal Circuit has at least on occasion paid lip service to the idea of syntactic analysis.¹⁹⁶ For example, in *Eastman Kodak Co. v. Goodyear Tire*

193. For a very similar exemplary claim and explanation of antecedent basis, see John M. Romary & Arie M. Michelsohn, *Patent Claim Interpretation After Markman: How the Federal Circuit Interprets Claims*, 46 AM. U. L. REV. 1887, 1893 (1997) (“A chair comprising a back member, seat member, and vertical support members, wherein the chair legs are made of wood” (internal quotation marks omitted)). Be aware, however, that this claim is likely deficient for other reasons, such as the fact that there is no statement as to how the pieces are connected.

194. *See id.*

195. The following proper claim presents a useful comparison: “A chair comprising a seat member, a back member, and a plurality of legs, wherein *the* legs are made of metal.”

196. For additional syntactical analyses, see *York Prods., Inc. v. Cent. Tractor Farm & Family Ctr.*, 99 F.3d 1568, 1573 (Fed. Cir. 1996) (“The language and syntax of the claim preclude a functional definition of ‘substantial part.’”); *Candela Laser Corp. v. Cynosure, Inc.*, No. 94-1515, 1995 U.S. App. LEXIS 12622, at *5 (Fed. Cir. May 24, 1995) (“The syntax of the claims indicates that the phrase ‘the light’ logically refers to the light that has been previously set forth in the claims”); *Credle v. Bond*, 25 F.3d 1566, 1571 (Fed. Cir. 1994) (“In determining the true meaning of the language of the [claim], the grammatical structure and syntax thereof may be instructive.”).

& Rubber Co.,¹⁹⁷ the court considered syntactic clues in interpreting the claim language "crystallizing the granulate to a density of at least 1.390 g/cm³ under forced motion at a temperature of 220° C to 260° C under an inert gas atmosphere."¹⁹⁸ The dispute was over what was to be heated to 220° C to 260° C. In determining that, the court noted:

To determine the proper referent for the claim's temperature clause, this court examines principally the claim language and any syntactic signs of its meaning.

The claim calls for "crystallizing the granulate to a density of at least 1.390 g/cm³ under forced motion at a temperature of 220° C to 260° C under an inert gas atmosphere." In this context, . . . the word "to" means "with the resultant condition of" or "toward a specified state," the word "at" means "in the state or condition of," and the word "under" means "undergoing or receiving the effects of." Under normal rules of syntax, therefore, "at" and "under" implies a controlled value (such as a process parameter), whereas "to" implies a measured and intended goal or condition (such as a polymer temperature). This context suggests that a step performed "at" a temperature indicates a process condition, not the condition of the matter under process.¹⁹⁹

In the *Eastman Kodak* case, the Federal Circuit acknowledged that attention to syntax can assist in interpretation. However, that idea needs to be taken one step further, because, for better or for worse, patent claims have their own grammar that is not consistent with proper English grammar. We need to study this grammar to understand the rules that are true for patent claims, and then apply these grammar rules when interpreting claims. Patent attorneys and judges are undoubtedly somewhat familiar at an unconscious level with the rules of patent grammar, but it should be possible to explore these rules in detail and possibly develop some prescriptive guidelines for

197. 114 F.3d 1547 (Fed. Cir. 1997), *abrogated on other grounds* by *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448 (Fed. Cir. 1998).

198. *See id.* at 1551 (emphasis omitted).

199. *Id.* at 1553 (citations omitted). It is interesting to note that the definitions of "to," "at," and "under" were obtained from *Webster's II New Riverside University Dictionary*. *Id.* (quoting WEBSTER'S II NEW RIVERSIDE UNIVERSITY DICTIONARY 1214, 134, 1256 (1988)). It is also interesting to note that Judge Lourie, who has a scientific background, dissented-in-part based on this construction, stating that "[w]hen the granulate is crystallized 'at a temperature,' the granulate is at that temperature." *Id.* at 1561 (Lourie, J., dissenting in part) (emphasis omitted).

patent grammar as well. A detailed study of patent grammar is beyond the scope of this Article and is the subject of a follow-up piece to this Article.

4. Bring Back the PHOSITA

Beyond information that can be obtained from the syntactic clues, there are other forms of context that assist in the determination of meaning, covered by a branch of linguistics known as pragmatics. There are two types of pragmatics. "Linguistic pragmatics" refers to the language surrounding the phrase in question, for example, the words in the surrounding phrases that explain to us what a pronoun means. Patent law covers linguistic pragmatics in the rules about antecedent basis.²⁰⁰ However, "situational pragmatics" refers to non-linguistic factors that affect meaning, i.e., the underlying knowledge of the speaker that brings context. "[T]he meaning of a sentence only has application . . . against a background of assumptions and practices that are not representable as a part of the meaning."²⁰¹ This is precisely the information that the PHOSITA is supposed to lend to claim construction—the underlying "background of assumptions and practices" that the person having ordinary skill in the art would understand and use to base his understanding of the claim terms in question.

The practical problem with applying situational pragmatics to claim construction is the question of where the "background of assumptions and practices" comes from. In order for the public notice function to be served, the background of assumptions and practices must come from some sort of community that has both a common understanding of structure as well as a shared reaction to the text.²⁰² It can not derive solely from information in the mind of the applicant.²⁰³ Although patent professionals (that is, practitioners and potentially academics) have been said to form an interpretive community,²⁰⁴ the community whose understanding and shared reaction

200. See *supra* notes 193-95 and accompanying text.

201. John R. Searle, *The Background of Meaning*, in *SPEECH ACT THEORY AND PRAGMATICS* 221, 221 (John R. Searle et al. eds., 1980); see also Burk & Lemley, *supra* note 4, at 50 ("[M]eaning simply cannot be found without reference to context that lies beyond the document itself.").

202. Frank H. Easterbrook, *Statutes' Domains*, 50 U. CHI. L. REV. 533, 533 n.2 (1983) (referring to the philosopher Wittgenstein).

203. See *infra* Part III.B.5.

204. John R. Thomas, *On Preparatory Texts and Proprietary Technologies: The Place of Prosecution Histories in Patent Claim Interpretation*, 47 UCLA L. REV. 183, 184-85 n.6 (1999).

should be the focus of interpretation is that collectively represented by the PHOSITA.

Nearly every Federal Circuit opinion on claim construction refers to the PHOSITA. In fact, the *Phillips* opinion extols the primacy of the PHOSITA: “The inquiry into how a person of ordinary skill in the art understands a claim term provides an objective baseline from which to begin claim interpretation.”²⁰⁵ Despite the Federal Circuit’s generous mention of the PHOSITA, its claim construction precedent reveals very little actual reference to the PHOSITA. In fact, the court rarely even tells us who the PHOSITA is. And maybe that is because the words defined are not unique to a particular community or PHOSITA. Does the word “about” mean something different to an electrical engineer versus a pharmaceutical manufacturer, at least at the first layer of construction to obtain the conventional (or ordinary and customary) meaning? Of course, in applying the definition of “about” to the context of the patent claim in the second layer of construction, it is likely the various technologies do come into play. Perhaps the PHOSITA is not required for the first level of claim construction, i.e., the determination of the ordinary or conventional word meaning, but the PHOSITA is integral to the second level of claim construction, i.e., putting the term in context. The PHOSITA may also be required in the first instance when an ordinary term is being used in a non-traditional manner in a particular art, but regardless must always be addressed in the second level of construction.

There has been much written about the PHOSITA with respect to other areas of law, particularly the presence (or absence) of the PHOSITA in obviousness analyses.²⁰⁶ However, from these articles, we can draw important considerations about working with the PHOSITA in claim construction. One aspect is the variables that come into play when considering the PHOSITA: in which particular “art” is he deemed to have ordinary skill; what level of skill in that art would be considered “ordinary”; and on what date is the snapshot of the PHOSITA’s skill taken?²⁰⁷ Further, Professors Burk and Lemley suggest a number of obstacles that prevent appropriate application of the PHOSITA. First, it is difficult for the non-

205. *Phillips III*, 415 F.3d 1303, 1313 (Fed. Cir. 2005) (en banc), *cert. denied*, 126 S. Ct. 1332 (2006).

206. See, e.g., Dan L. Burk & Mark A. Lemley, *Is Patent Law Technology-Specific?*, 17 BERKELEY TECH. L.J. 1155 (2002); Rebecca S. Eisenberg, *Obvious to Whom? Evaluating Inventions from the Perspective of PHOSITA*, 19 BERKELEY TECH. L.J. 885, 888 (2004) (noting that the “PHOSITA sits on the sidelines of obviousness analysis”).

207. See Burk & Lemley, *supra* note 206, at 1188-90.

scientific district court judge, with limited experience in patent cases, to put himself into the shoes of an ordinary scientist.²⁰⁸ Second, it is difficult to look backwards in time to determine what a scientist knew a number of years ago without interjecting hindsight bias.²⁰⁹ Finally, they claim that judges will, based on years of experience with *stare decisis*, naturally evolve to applying the determination of a certain level of skill in a particular art again in subsequent cases.²¹⁰

In order to truly return the PHOSITA to the claim construction table, a number of changes in current claim construction methodology must be implemented. The first requirement, but certainly not the easiest, is that fact deference must be restored, at least partially, to claim construction. As Professors Burk and Lemley remark in the context of the obviousness PHOSITA, “A clear signal by the Federal Circuit that identifying the PHOSITA is a fact-specific question that must be decided anew in each case (perhaps by reference to expert testimony) might go a long way towards” clearing some of the above-referenced obstacles.²¹¹ In particular, district courts must be encouraged to make factual findings about who exactly this PHOSITA is in any given case and what he knows, and the Federal Circuit must then rely on those findings, unless clearly erroneous.²¹² The Federal Circuit has acknowledged that it cannot construe claims in a vacuum; some facts must be known in order to construe claims.²¹³ This is not a complete reversal of precedent—*Markman* and its progeny can remain intact. Claim construction can still remain a question of law for the court to decide; however, this question of law can be based on factual information, namely who the PHOSITA is. The second change will flow from the first—district court judges must be encouraged to find the PHOSITA. District court judges have moved away from determining who the PHOSITA is, because it seems to be extraneous work on their part. If the Federal Circuit begins to

208. *Id.* at 1196-97.

209. *Id.* at 1198.

210. *See id.* at 1199.

211. *Id.* at 1202.

212. Professors Burk and Lemley make these points as well, with respect to the obviousness PHOSITA: “[T]he Federal Circuit may need to resist its tendency . . . to substitute its factual conclusions for those of the district court. . . . Courts should also spend more time and effort fleshing out the PHOSITA, who in many opinions seems to be mentioned only perfunctorily.” *Id.* at 1201-02.

213. *See, e.g.,* *Wilson Sporting Goods Co. v. Hillerich & Bradsby Co.*, 442 F.3d 1322, 1327 (Fed. Cir. 2006) (“In this case, despite entry of a final judgment, neither the trial court nor the parties supplied this court with any information about the accused products. . . . Furthermore, this sparse record lacks the complete context for accurate claim construction.”).

acknowledge and utilize the district court's determination, then the district court judges will be more apt to include the PHOSITA in their claim construction methodologies.

There are some concerns that have been raised with respect to this notion, one of which being the idea that finding the PHOSITA at some early stage of litigation will create a complex layer on top of the *Markman* stage. Often times, when the district court has found the PHOSITA, the inquiry is subsumed with the determination of exactly who is an expert, a question often raised at about the same point in time. Litigants are already accustomed to developing this information at an early stage, and thus the determination of a PHOSITA at the same time, in particular if the PHOSITA were one and the same with an expert, would not add additional effort or expense to either the courts or the parties. By inquiring into who the PHOSITA is and what the PHOSITA knows, claim interpretation would find more foothold in linguistics and specifically in pragmatics. Further, in doing so, claim construction would also effectuate better public notice.

5. Do Not Seek the Applicant's Intent

Given that one of the key functions of patents is to promote public notice, proper claim construction cannot then rely on the applicant's intent, as determined by extensive resort to the patent's specification and prosecution history. However, the applicant's intent factors greatly in the Federal Circuit's claim construction calculus. Consider, for example, excerpts from recent decisions of the court, where in one case the Federal Circuit concluded that inventors "had no *intention* of claiming bicarbonates"²¹⁴ and in another case investigated "[t]he meaning that the patentees *intended* to accord to the claim phrase."²¹⁵

This quest for the patentee's intent is inapposite in determining the meaning of a claim term.²¹⁶ Moreover, by querying the inventor's intent, the

214. Warner-Lambert Co. v. Teva Pharms. USA, Inc., 418 F.3d 1326, 1347 (Fed. Cir. 2005) (emphasis added).

215. Nellcor Puritan Bennett, Inc. v. Masimo Corp., 402 F.3d 1364, 1367 (Fed. Cir. 2005) (emphasis added); cf. Astrazeneca AB v. Mut. Pharm. Co., 384 F.3d 1333, 1340 (Fed. Cir. 2004) ("[W]hile it is of course improper to limit the claims to the particular preferred embodiments described in the specification, the patentee's choice of preferred embodiments can shed light on the *intended* scope of the claims." (emphasis added)).

216. George H. Taylor, *Structural Textualism*, 75 B.U. L. REV. 321, 328 (1995) ("Meaning is not a matter of a private language or of private intentions in the head of an author; meaning is necessarily a public and social phenomenon." (citing LUDWIG

spirit of the PHOSITA is excised from the calculus. In fact, the practice of the Federal Circuit to look toward the specification to rein in the ordinary and customary meaning of claim terms has the indirect effect of seeking what the inventor intended, rather than honoring the construction of the PHOSITA.²¹⁷ The very idea of the PHOSITA is that it is an objective legal construct, interjected to avoid subjective analysis and to better effectuate the public notice function of patent law. To consider the inventor's intent would be to thwart the very objectivity the PHOSITA provides.

A more appropriate mechanism for claim construction might instead be akin to textualism. As Professor George Taylor notes: "Textualism examines two forms of context: internal and external."²¹⁸ Internal context focuses on the "semantic character of a text's structure" and the "movement at work in a text between such elements as word and sentence, or sentence and text."²¹⁹ This internal context is covered by the first three notions described above. External context, by comparison, analogizes to the idea of interpretation from the point of view of the PHOSITA and recognizes that construction also "depends on background assumptions" and "cannot neglect the cultural, political, and ideological impingements on the production and interpretation of meaning."²²⁰ The relationship and applicability of textualism to patent claim interpretation is a topic unto itself and will not be explored further here, except to note that consistent claim construction requires that the interpretation be divorced from any intent of the patentee.

C. Integration with Canons of Claim Interpretation

Many of the canons of claim construction not only can be used in conjunction with the linguistic-based methodology laid out above, but in fact, some of them even bolster the validity of the process. For example, consider the doctrine of claim differentiation. "There is presumed to be a difference in meaning and scope when different words or phrases are used in

WITTGENSTEIN, PHILOSOPHICAL INVESTIGATIONS 199-202 (Elizabeth Anscombe trans., 3d ed. 1968)).

217. Holbrook, *supra* note 38, at 142. To be fair, where the inventor has made an express disavowal or has otherwise provided a clear definition of a word contrary to its ordinary and customary meaning, the inventor's intent can certainly usurp the ordinary and customary meaning. However, where there is no such disavowal or contrary definition, to so limit the claims by importing limitations from the specification can only be described as interjecting the inventor's perceived intent.

218. Taylor, *supra* note 216, at 324.

219. *Id.* at 324-25.

220. *Id.* at 325.

separate claims.”²²¹ Although this canon was long presumed dead before its revival as one of the bases for the decision in *Phillips*,²²² claim differentiation makes linguistic sense. It is unusual for a speaker to use different words to refer to the same thing, unless the speaker is trying to indicate some fundamental difference between certain members of that thing.²²³ For example, a speaker is unlikely to use both the terms “dog” and “puppy” to mean the same thing; rather, he is likely providing a difference in scope indicating that a certain class of the “dogs” are of a young age. In patent usage, if the inventor uses the broad term “dog” in an independent claim, but later in a dependent claim uses the term “puppy,” then the inference is that the use of “dog” in the independent claim is broader. Because this canon relies heavily on the ordinary and customary meanings of words, it fits naturally within the claim construction methodology proposed in this Article. In the same vein, the canon that states that a term that is used repeatedly should be given the same definition throughout²²⁴ is also linguistically sound and should fit easily within this scheme.

Other claim construction canons also have some linguistic relevance. For example, the canon that instructs adopting the narrow interpretation when both a broad and a narrow interpretation exist²²⁵ has solid footing in this system. Although the Federal Circuit encouraged use of this canon as a penalty to the patentee for his ambiguity in claim drafting, another valid reason for adopting this canon is the notion that the ordinary and customary meaning of a word must have some overlapping universal boundaries to be generally understood. While each reader may hear the word “rose” and derive a slightly different ordinary and customary meaning, within those boundaries there must be a sliver of overlapping meaning such that we all

221. *Tandon Corp. v. U.S. Int’l Trade Comm’n*, 831 F.2d 1017, 1023 (Fed. Cir. 1987).

222. *Compare Phillips III*, 415 F.3d 1303, 1329 (Fed. Cir. 2005) (en banc) (Lourie, J., concurring in part and dissenting in part) (“The court premises its reverse-and-remand decision on the concept of claim differentiation . . .”), *cert. denied*, 126 S. Ct. 1332 (2006), *with Kraft Foods, Inc. v. Int’l Trading Co.*, 203 F.3d 1362, 1368 (Fed. Cir. 2000) (rejecting doctrine of claim differentiation in light of insight provided by written description), *and O.I. Corp. v. Tekmar Co.*, 115 F.3d 1576, 1582-84 (Fed. Cir. 1997) (same).

223. Even the great urban legend that Eskimos had an inordinate number of words for “snow” was debunked because the various terms each had a different scope, not unlike the English usage of “blizzard” and “flurry,” which both mean snow but reference different qualities. *See* GEOFFREY K. PULLUM, *THE GREAT ESKIMO VOCABULARY HOAX AND OTHER IRREVERENT ESSAYS ON THE STUDY OF LANGUAGE* 159-74 (1991); Wikipedia, *Eskimo Words for Snow*, http://en.wikipedia.org/wiki/Eskimo_words_for_snow (last visited Feb. 18, 2007).

224. *See CVI/Beta Ventures, Inc. v. Tura LP*, 112 F.3d 1146, 1159 (Fed. Cir. 1997).

225. *See Athletic Alternatives, Inc. v. Prince Mfg., Inc.*, 73 F.3d 1573, 1581 (Fed. Cir. 1996).

understand what is meant. If you consider the ordinary and customary meanings of a certain term given by a number of people in the mode of a Venn diagram, there will be some area where all of the meanings overlap. This narrow claim construction is a better choice for the ordinary and customary meaning than is a broad one, because it is most representative of the ordinary and customary meaning for the largest group of people.²²⁶

The canon that provides for instances when the claim preamble is a limitation²²⁷ also has some footing in linguistic analysis. The preamble acts as a limitation where a claim term derives significance or meaning from the preamble, as well as where the preamble is essential to particularly pointing out the invention. In these cases, the preamble becomes part of the critical syntax of the claim, a portion of the claim sentence that helps direct meaning for the terms in dispute. Arguably, in giving a linguistic eye toward the claim construction process, the preamble would always be relevant when considering the syntax of the claim; however, in many claims, the preamble is no more than a generic sentence starter that adds little meaning or context to the claim.²²⁸

IV. CONCLUSION

Because these linguistic notions are more attuned to the process by which we, as speakers of English, naturally strive to define the words that we read and hear, these techniques are more likely to produce consistent claim construction results, yielding greater certainty and effectuating the public

226. The concern has been raised by practicing attorneys that this is unrealistic because zealous lawyers will make arguments that potentially fall outside of the overlapping portion of the Venn diagram. I disagree; there must still be some commonality in order for the proposed definition to be appropriate and for the lawyer to maintain some credibility with the court. For example, in defining "rose" one attorney may argue that it is a pink flower with thorns, and another attorney may argue that it is a red flower with a powerful fragrance. The Venn diagram commonality, at the least, can include certain flowers in the pink-red family, a reasonable, ordinary and customary definition. The attorney that comes in and argues that "rose" is a blue-haired camel falls outside of this commonality and loses credibility with the court (and likely the case for his client).

227. See *Bell Commc'ns Research, Inc. v. Vitalink Commc'ns Corp.*, 55 F.3d 615, 620 (Fed. Cir. 1995).

228. For example, a preamble may be as simple and non-descriptive as "a method," "an article," or "a system." See, e.g., *Processing Internet Protocol Security Traffic*, U.S. Patent No. 6,996,842 (filed Jan. 30, 2001) (issued Feb. 7, 2006). On the other hand, the preamble may include more description. See, e.g., *Language Translation System and Method Using Specialized Dictionaries*, U.S. Patent No. 6,996,520 (filed Nov. 14, 2003) (issued Feb. 7, 2006) ("A system for translating text from a source language to a target language . . .").

notice and boundary staking functions of patent claims. The Federal Circuit, rather than taking advantage of the en banc opportunity explicitly chosen to provide clarity and consistency in claim construction that is necessary to allow patents to achieve their public notice function, passed on the opportunity and reverted to the anything-but-clear status quo. This status quo, besides failing to address public notice, also neglects some basic intuitions about understanding the language that we all have. Because we all have these intuitions, it would be expected that anyone approaching claim construction from this angle will have a reasonable chance of reaching the same conclusion, thereby improving consistency and in the end, public notice.